

PROJECT: 34360

REFERENCE: R-1015

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND
3	SITE PLAN
4	PROFILE
5	CROSS SECTION
6-9	BORE LOGS
10-33	SOIL TEST RESULTS

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

STRUCTURE

SUBSURFACE INVESTIGATION

COUNTY CRAVEN

PROJECT DESCRIPTION US 70 (Havelock Bypass) from North of Pine Grove to North of Cateret County

SITE DESCRIPTION Site #5 - Bridge on SR 1756 over US 70 (Havelock Bypass) Between SR 1125 and SR 1763

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-1015	1	33

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT, FOR BIDDING AND CONSTRUCTION PURPOSES. REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

NOTES:

1. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.

2. BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

C.R. PASTRANA

M. RADFORD

INVESTIGATED BY ESP Associates, P.A.

DRAWN BY T.T. WALKER

CHECKED BY P. WEAVER

SUBMITTED BY ESP Associates, P.A.

DATE JULY 2016



DocuSigned by:
Paul Weaver 10/10/2016

01847D3739AD48C SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

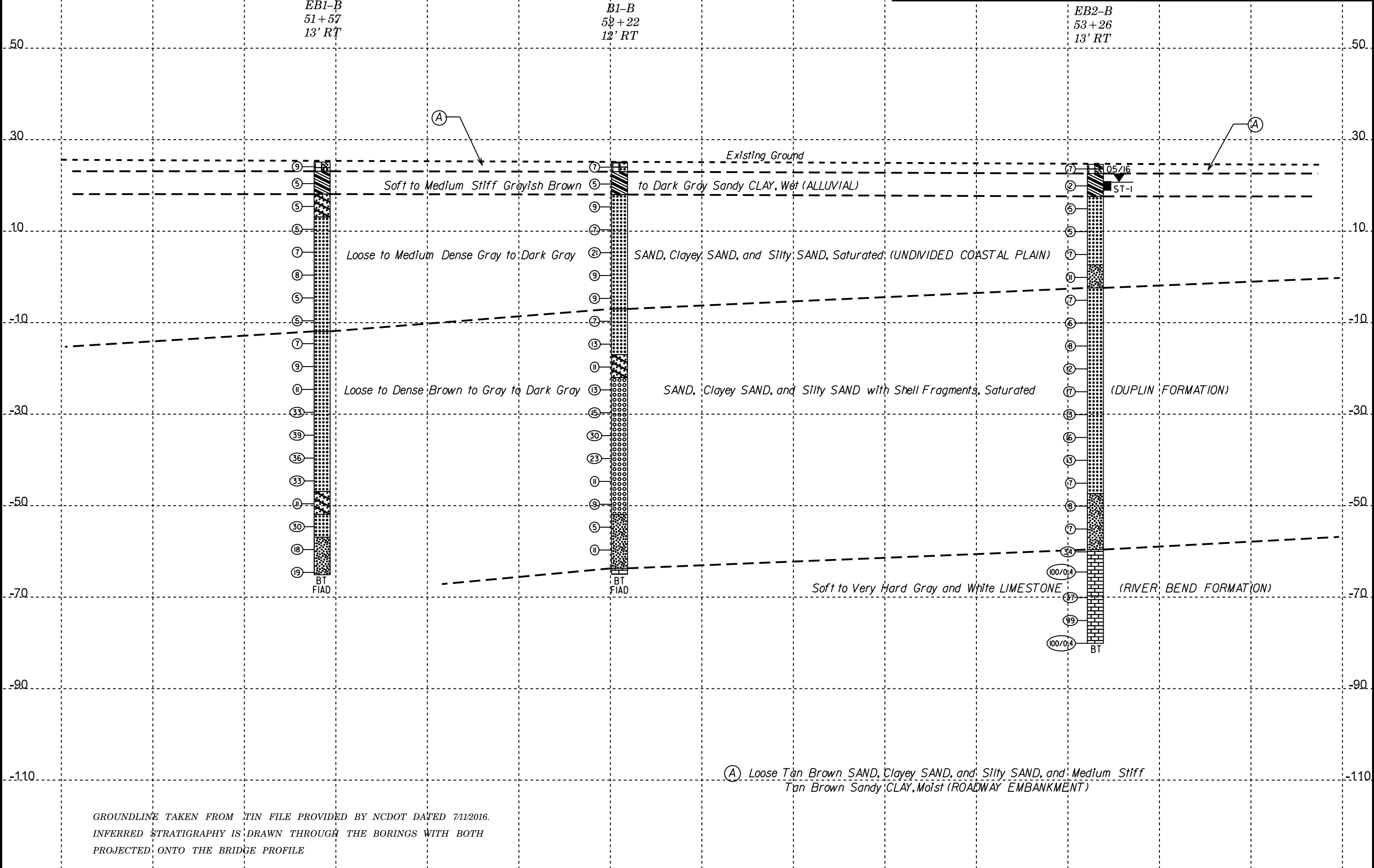
DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION										GRADATION										ROCK DESCRIPTION										TERMS AND DEFINITIONS									
SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6										WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.										HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:										ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS IN OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.									
SOIL LEGEND AND AASHTO CLASSIFICATION										ANGULARITY OF GRAINS										WEATHERED ROCK (WR)										CRISTALLINE ROCK (CR)									
MINERALOGICAL COMPOSITION										COMPRESSIBILITY										WEATHERING										FRESH									
PERCENTAGE OF MATERIAL										GROUND WATER										VERY SLIGHT (V SL.)										SLIGHT (SL.)									
MISCELLANEOUS SYMBOLS										RECOMMENDATION SYMBOLS										MODERATE (MOD.)										MODERATELY SEVERE (MOD. SEV.)									
SOIL MOISTURE - CORRELATION OF TERMS										ABBREVIATIONS										SEVERE (SEV.)										VERY SEVERE (V SEV.)									
COMPLETE										ROCK HARDNESS										COMPLETE										ROCK HARDNESS									
FRACTURE SPACING										BEDDING										SOFT										VERY SOFT									
INDURATION										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE										MODERATELY INDURATED										INDURATED									
EXTREMELY INDURATED										FRIABLE																													



GROUNDLINE TAKEN FROM TIN FILE PROVIDED BY NCDOT DATED 7/1/2016.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE BRIDGE PROFILE

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34360.1.1			TIP R-1015			COUNTY CRAVEN			GEOLOGIST Pastrana, C.R.					
SITE DESCRIPTION Site # 5 - Bridge on SR 1756 over US 70 (Havelock Bypass) Between SR 1125 and SR 1763									GROUND WTR (ft)					
BORING NO. EB1-B			STATION 51+57			OFFSET 13 ft RT			ALIGNMENT -Y3-			0 HR. N/A		
COLLAR ELEV. 25.1 ft			TOTAL DEPTH 90.2 ft			NORTHING 413,201			EASTING 2,618,999			24 HR. FIAD		
DRILL RIG/HAMMER EFF./DATE BRI2296 CME-45D 81% 06/03/2015						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER Radford, M.			START DATE 05/24/16			COMP. DATE 05/24/16			SURFACE WATER DEPTH N/A					
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100			ELEV. (ft)	DEPTH (ft)
30														
25	25.1	0.0	3	4	5	9						M	25.1	0.0
20	21.4	3.7	1	2	3	5					SS-1	30%	23.9	1.2
15	16.4	8.7	1	1	4	5						W	23.1	2.0
10	11.4	13.7	2	2	3	5						Sat.	18.1	7.0
5	6.4	18.7	2	3	4	7						Sat.	13.1	12.0
0	1.4	23.7	2	3	5	8						Sat.		
-5	-3.6	28.7	3	3	2	5						Sat.		
-10	-8.6	33.7	4	2	3	5						Sat.		
-15	-13.6	38.7	3	3	4	7						Sat.		
-20	-18.6	43.7	2	4	5	9						Sat.		
-25	-23.6	48.7	4	6	5	11						Sat.		
-30	-28.6	53.7	11	14	19	33						Sat.		
-35	-33.6	58.7	12	17	22	39						Sat.		
-40	-38.6	63.7	11	17	19	36					SS-2	Sat.		
-45	-43.6	68.7	11	14	19	33						Sat.		
-50	-48.6	73.7	6	6	5	11						Sat.	-46.9	72.0

WBS 34360.1.1			TIP R-1015			COUNTY CRAVEN			GEOLOGIST Pastrana, C.R.					
SITE DESCRIPTION Site # 5 - Bridge on SR 1756 over US 70 (Havelock Bypass) Between SR 1125 and SR 1763									GROUND WTR (ft)					
BORING NO. EB1-B			STATION 51+57			OFFSET 13 ft RT			ALIGNMENT -Y3-			0 HR. N/A		
COLLAR ELEV. 25.1 ft			TOTAL DEPTH 90.2 ft			NORTHING 413,201			EASTING 2,618,999			24 HR. FIAD		
DRILL RIG/HAMMER EFF./DATE BRI2296 CME-45D 81% 06/03/2015						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER Radford, M.			START DATE 05/24/16			COMP. DATE 05/24/16			SURFACE WATER DEPTH N/A					
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
-50						Match Line								
-55	-53.6	78.7	8	14	16	30					Sat.	-51.9		77.0
-60	-58.6	83.7	5	9	9	18					Sat.	-56.9		82.0
-65	-63.6	88.7	4	8	11	19					Sat.	-65.1	90.2	
Boring Terminated at Elevation -65.1 ft In Coastal Plain: SILTY SAND (Duplin Formation)														
Other Samples: ST-2 (5.2 - 7.7)														

NCDOT BORE DOUBLE R1015_GEO_BRDG_SITES_GINT LOGS.GPJ NC_DOT.GDT 7/28/16

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 34360.1.1			TIP R-1015			COUNTY CRAVEN			GEOLOGIST F. Westcott-NC DOT							
SITE DESCRIPTION Site # 5 - Bridge on SR 1756 over US 70 (Havelock Bypass) Between SR 1125 and SR 1763											GROUND WTR (ft)					
BORING NO. B1-A			STATION 52+25			OFFSET 18 ft LT			ALIGNMENT -Y3-			0 HR.	N/A			
COLLAR ELEV. 23.5 ft			TOTAL DEPTH 74.9 ft			NORTHING 413,260			EASTING 2,619,045			24 HR.	3.3			
DRILL RIG/HAMMER EFF./DATE CME-45B						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic							
DRILLER NCDOT Driller			START DATE 08/13/01			COMP. DATE 08/13/01			SURFACE WATER DEPTH N/A							
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
25																
	23.5	0.0	4	4	5	9								23.5	GROUND SURFACE	0.0
20	19.5	4.0	3	3	4	7								20.9	ROADWAY EMBANKMENT Medium Dense, Tan, Slightly Clayey, Silty SAND	2.6
15	15.1	8.4	5	5	8	13									UNDIVIDED COASTAL PLAIN Loose to Medium Dense, Gray, Coarse to Fine SAND, Saturated	
10	10.1	13.4	3	8	7	15										
5	5.1	18.4	9	4	2	6										
0	0.1	23.4	4	8	7	15										
-5	-4.9	28.4	5	6	7	13								-3.5	COASTAL PLAIN Medium Dense to Loose, Gray, Coarse to Fine SAND with Shell Fragments, Saturated (Duplin Formation)	27.0
-10	-9.9	33.4	6	9	8	17										
-15	-14.9	38.4	3	3	5	8										
-20	-19.9	43.4	3	5	4	9										
-25	-24.9	48.4	9	10	13	23										
-30	-29.9	53.4	13	27	39	66										
-35	-34.9	58.4	14	20	27	47										
-40	-39.9	63.4	12	14	16	30										
-45	-44.9	68.4	8	11	8	19										
-50	-49.9	73.4	4	9	11	20								-51.4	Boring Terminated at Elevation -51.4 ft In Coastal Plain: SAND (Duplin Formation)	74.9

NCDOT BORE DOUBLE R1015 GEO_BRDG_SITE5 GINT LOGS.GPJ NC_DOT.GDT 7/28/16

NCDOT BORE DOUBLE R1015 GEO_BRDG_SITE5_GINT LOGS.GPJ NC_DOT.GDT 7/28/16

WBS 34360.1.1			TIP R-1015			COUNTY CRAVEN			GEOLOGIST Pastrana, C.R.					
SITE DESCRIPTION Site # 5 - Bridge on SR 1756 over US 70 (Havelock Bypass) Between SR 1125 and SR 1763										GROUND WTR (ft)				
BORING NO. EB2-B			STATION 53+26			OFFSET 13 ft RT			ALIGNMENT -Y3-		0 HR. N/A			
COLLAR ELEV. 24.6 ft			TOTAL DEPTH 104.1 ft			NORTHING 413,278			EASTING 2,619,148		24 HR. 3.9			
DRILL RIG/HAMMER EFF./DATE BRI2296 CME-45D 81% 06/03/2015						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER Radford, M.			START DATE 05/23/16			COMP. DATE 05/23/16			SURFACE WATER DEPTH N/A					
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	<div><div></div><div>MOI</div></div>	LOG	SOIL AND ROCK DESCRIPTION
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
-55						Match Line								
-60	-59.1	83.7	2	8	26	<div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></</div></div></div>								

SOILS LABORATORY TESTS RESULTS

WBS NO.: 34360.1.1

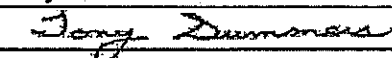
TIP NO.: R-1015

COUNTY: Craven

SITE DESCRIPTION: Site #5 - Bridge on SR 1756 over US 70 (Havelock Bypass) Between SR 1125 and SR 1763

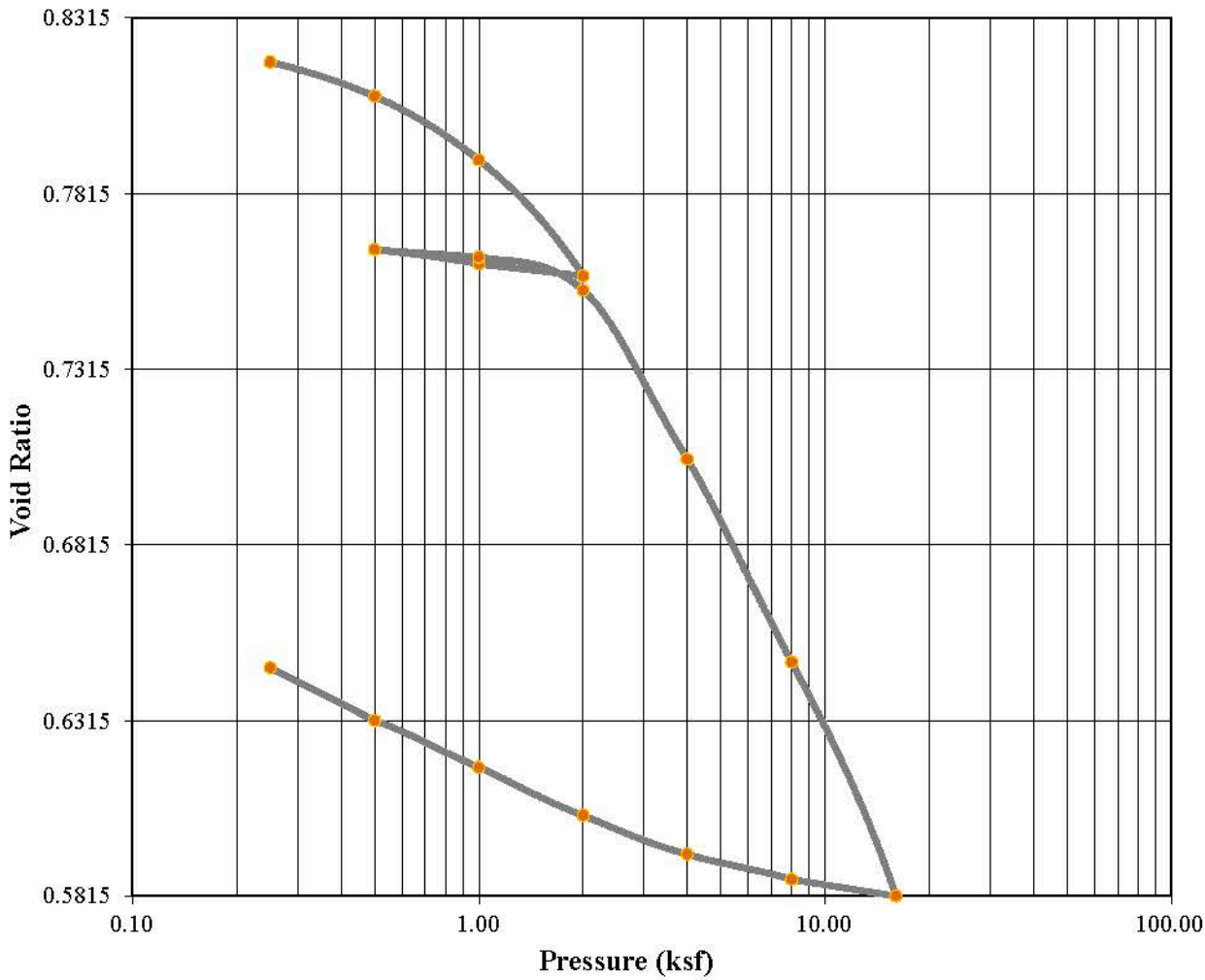
SAMPLE NO.	Boring	DEPTH INTERVAL	AASHTO CLASS	N	L.L	P.I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE
							CSE. SAND	F. SAND	SILT	CLAY	10	40	200	
SS-1	EB1-B	3.7-5.2	A-6 (6)	5	36	20	9	43	15	33	100	98	49	30.1
SS-2	EB1-B	63.7-65.2	A-3 (0)	36	19	NP	76	19	4	1	98	55	6	
SS-3	B1-B	8.7-10.2	A-3 (0)	9	13	NP	1	90	4	5	100	100	10	
SS-4	B1-B	68.7-70.2	A-1-b (0)	11	11	1	86	11	2	1	95	37	4	
SS-5	EB2-B	13.7-15.2	A-3 (0)	5	19	NP	9	83	4	4	100	99	8	
SS-6	EB2-B	73.7-75.2	A-2-4 (0)	8	22	1	1	76	19	4	100	99	27	
ST-1	EB2-B	3.7-5.7	A-6 (6)	2	32	16	9	38	13	40	100	98	55	30.9

Tony Summers



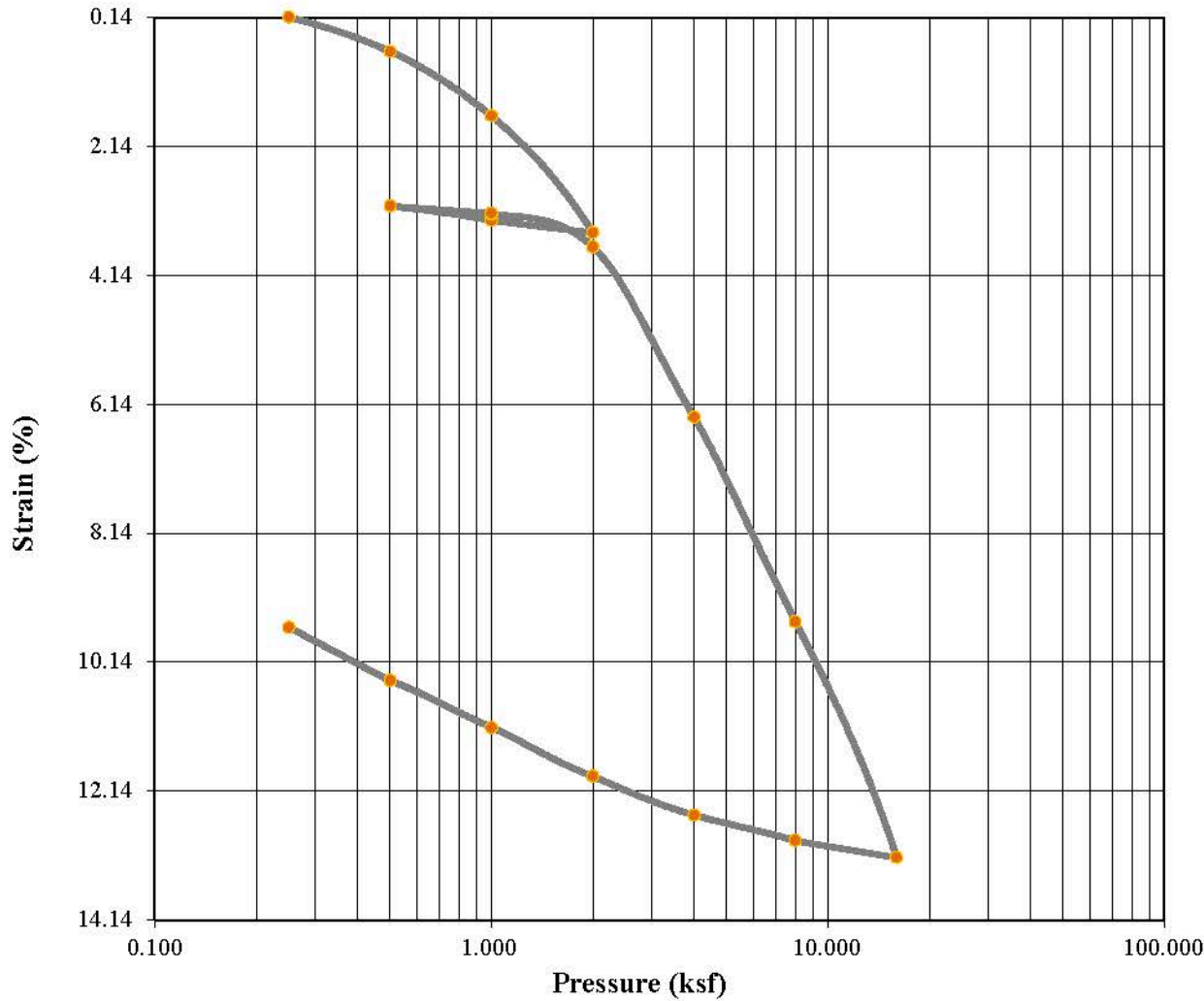
Certification No. 121-01-1108

Consolidation Test
Test Results



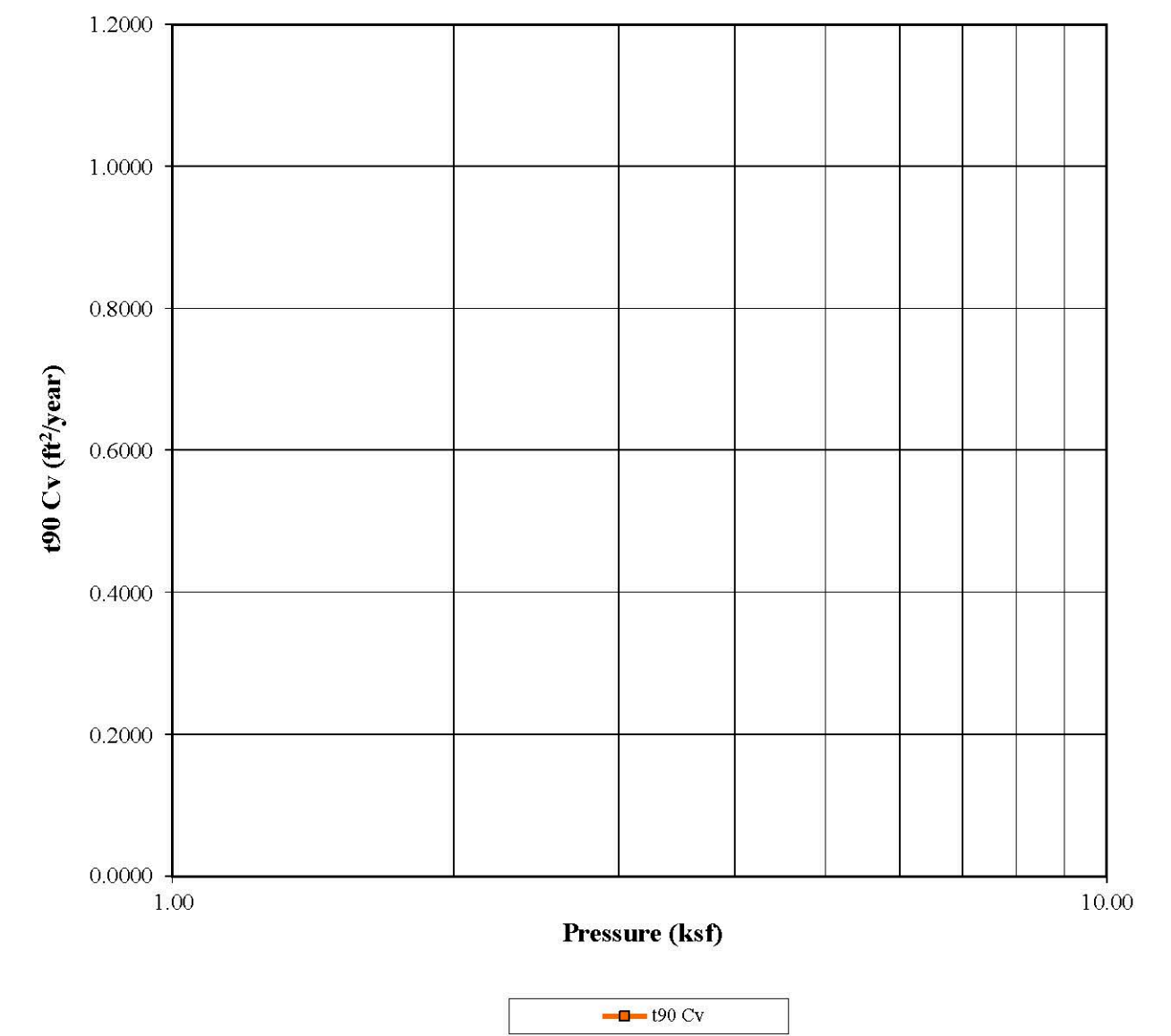
	Before	After	Liquid Limits:	32	Test Date:	6/24/2016
Moisture (%):	30.90	23.53	Plastic Limits:	16		
Dry Density (pcf):	90.67	102.79	Plasticity Index (%):	16		
Saturation (%):	99.31	102.31				
Void Ratio:	0.8225	0.6475	Specific Gravity:	2.650	Assumed	
Soil Description:						
Project Number:	CS34.325		Depth: 3.7'-5.7'		Remarks:	
Sample Number:	ST-1		Boring Number: EB2-B			
Project:	R-1015 (site #5)					
Client:						
Location:	EB2-B ST-1(3.7'-5.7')					

Consolidation Test
Test Results



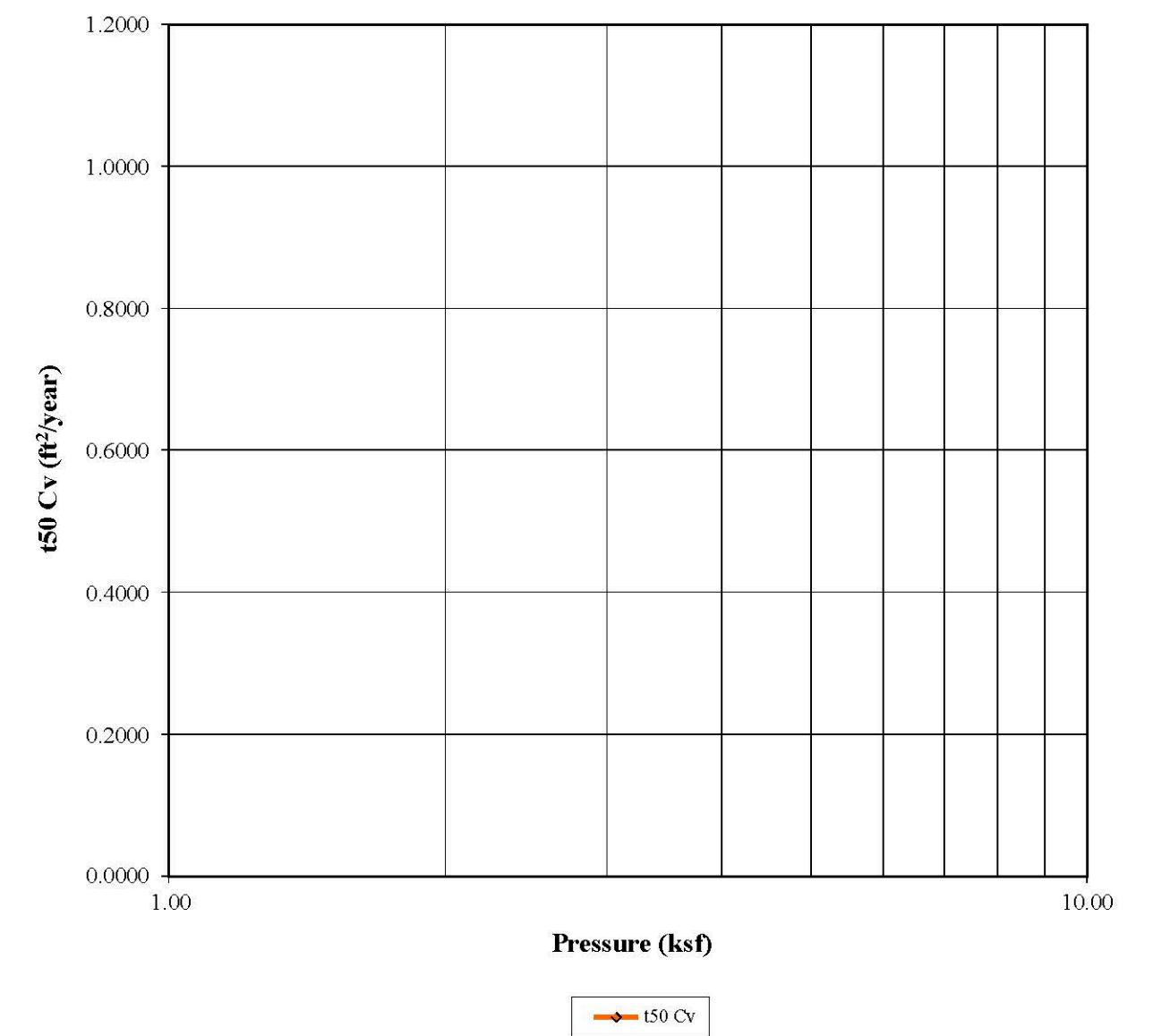
	Before	After	Liquid Limits:	32	Test Date:	6/24/2016
Moisture (%):	30.90	23.53	Plastic Limits:	16		
Dry Density (pcf):	90.67	102.79	Plasticity Index (%):	16		
Saturation (%):	99.31	102.31				
Void Ratio:	0.8225	0.6475	Specific Gravity:	2.650	Assumed	
Sample Description:						
Project Number:	CS34.325		Depth: 3.7'-5.7'		Remarks:	
Sample Number:	ST-1		Boring Number: EB2-B			
Project:	R-1015 (site #5)					
Client:						
Location:	EB2-B ST-1(3.7'-5.7')					

Consolidation Test
Test Results



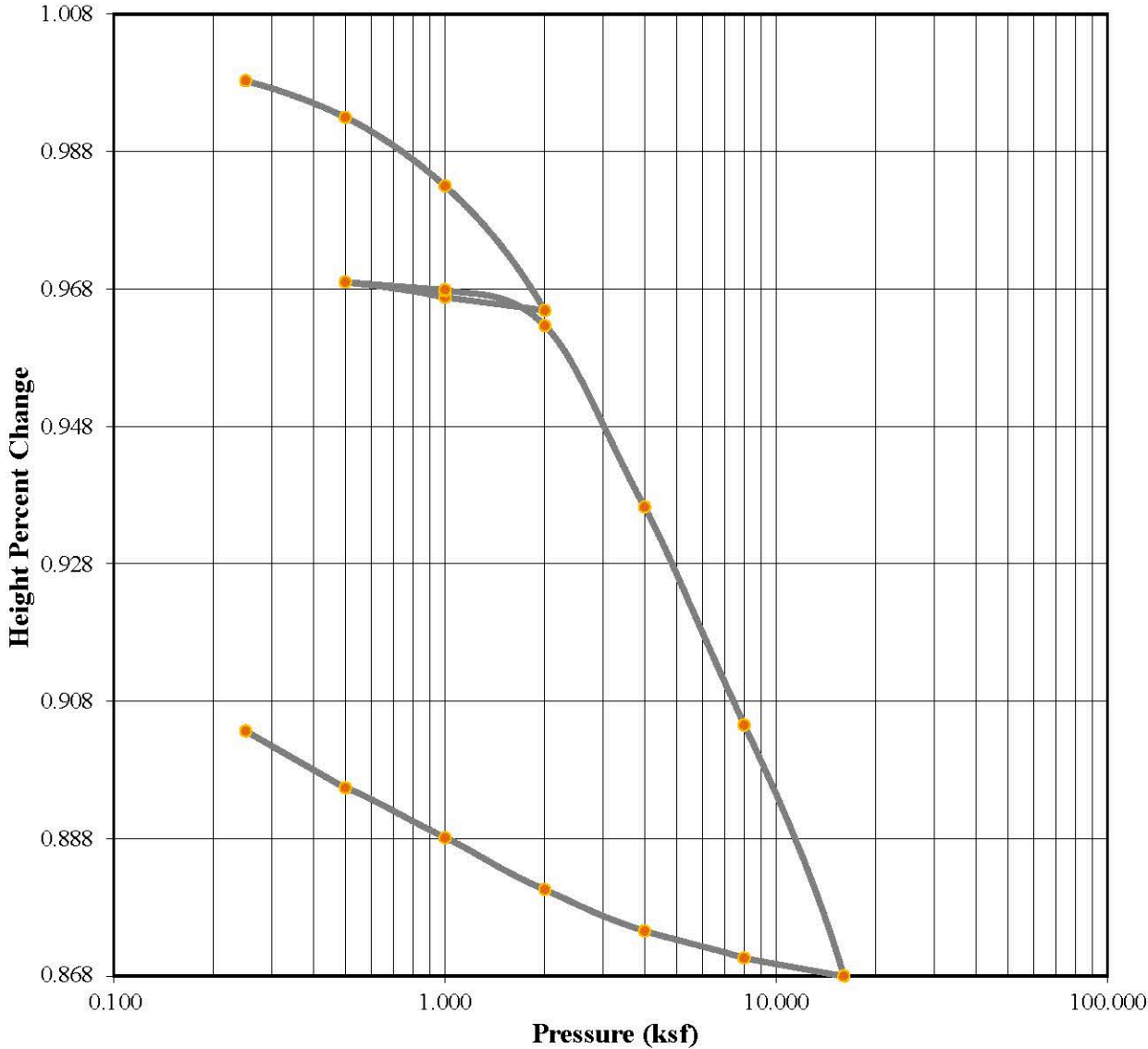
	Before	After	Liquid Limits:	32	Test Date:	6/24/2016
Moisture (%):	30.90	23.53	Plastic Limits:	16		
Dry Density (pcf):	90.67	102.79	Plasticity Index (%):	16		
Saturation (%):	99.31	102.31				
Void Ratio:	0.8225	0.6475	Specific Gravity:	2.650	Assumed	
Soil Description:						
Project Number:	CS34.325		Depth: 3.7'-5.7'		Remarks:	
Sample Number:	ST-1		Boring Number: EB2-B			
Project:	R-1015 (site #5)					
Client:						
Location:	EB2-B ST-1 (3.7'-5.7')					

Consolidation Test
Test Results



	Before	After	Liquid Limits:	32	Test Date:	6/24/2016
Moisture (%):	30.90	23.53	Plastic Limits:	16		
Dry Density (pcf):	90.67	102.79	Plasticity Index (%):	16		
Saturation (%):	99.31	102.31				
Void Ratio:	0.8225	0.6475	Specific Gravity:	2.650	Assumed	
Soil Description:						
Project Number:	CS34.325		Depth: 3.7'-5.7'		Remarks:	
Sample Number:	ST-1		Boring Number: EB2-B			
Project:	R-1015 (site #5)					
Client:						
Location:	EB2-B ST-1 (3.7'-5.7')					

Consolidation Test
Test Results



	Before	After	Liquid Limits:	32	Test Date:	6/24/2016
Moisture (%):	30.90	23.53	Plastic Limits:	16		
Dry Density (pcf):	90.67	102.79	Plasticity Index (%):	16		
Saturation (%):	99.31	102.31				
Void Ratio:	0.8225	0.6475	Specific Gravity:	2.650	Assumed	
Soil Description:						
Project Number:	CS34.325		Depth: 3.7'-5.7'		Remarks:	
Sample Number:	ST-1		Boring Number: EB2-B			
Project:	R-1015 (site #5)					
Client:						
Location:	EB2-B ST-1(3.7'-5.7')					

Consolidation Test Results
Summary

Project: R-1015 (site #5)
Location: EB2-B ST-1(3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

Sample Description: Gray to Dark Gray Sandy CLAY (A-6)
Remarks:

Test Number:
Test Date: 6/24/2016

Index	Load Sequence (ksf)	Cummulative Change in Height (in)	Specimen Height (in)	Height of Void (in)	Vertical Strain (%)	Void Ratio	t90 Fitting Time (min)	t50 Fitting Time (min)	t90 Cv (ft2/year)	t50 Cv (ft2/year)
0	0.000	0.0000	1.0000	0.4510	0.00	0.8213	0.000	0.000	0.000	0.000
1	0.250	0.0014	0.9986	0.4496	0.14	0.8188	0.000	0.000	0.000	0.000
2	0.500	0.0067	0.9933	0.4443	0.67	0.8091	0.000	0.000	0.000	0.000
3	1.000	0.0167	0.9833	0.4343	1.67	0.7910	0.000	0.000	0.000	0.000
4	2.000	0.0348	0.9652	0.4162	3.48	0.7580	0.000	0.000	0.000	0.000
5	1.000	0.0329	0.9671	0.4181	3.29	0.7614	0.000	0.000	0.000	0.000
6	0.500	0.0307	0.9693	0.4203	3.07	0.7654	0.000	0.000	0.000	0.000
7	1.000	0.0319	0.9681	0.4190	3.19	0.7632	0.000	0.000	0.000	0.000
8	0.500	0.0307	0.9693	0.4203	3.07	0.7655	0.000	0.000	0.000	0.000
9	1.000	0.0318	0.9682	0.4192	3.18	0.7634	0.000	0.000	0.000	0.000
10	2.000	0.0370	0.9630	0.4139	3.70	0.7539	0.000	0.000	0.000	0.000
11	4.000	0.0634	0.9366	0.3875	6.34	0.7058	0.000	0.000	0.000	0.000
12	8.000	0.0951	0.9049	0.3558	9.51	0.6481	0.000	0.000	0.000	0.000
13	16.000	0.1317	0.8683	0.3193	13.17	0.5815	0.000	0.000	0.000	0.000
14	8.000	0.1291	0.8709	0.3219	12.91	0.5863	0.000	0.000	0.000	0.000
15	4.000	0.1251	0.8749	0.3258	12.51	0.5934	0.000	0.000	0.000	0.000
16	2.000	0.1191	0.8809	0.3319	11.91	0.6045	0.000	0.000	0.000	0.000
17	1.000	0.1115	0.8885	0.3394	11.15	0.6182	0.000	0.000	0.000	0.000
18	0.500	0.1043	0.8957	0.3467	10.43	0.6315	0.000	0.000	0.000	0.000
19	0.250	0.0960	0.9040	0.3550	9.60	0.6465	0.000	0.000	0.000	0.000

Predicted value indicated with *

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test
Consolidation Specimen Information

Project: R-1015 (site #5)
Location: EB2-B ST-1(3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325
Test Date: 6/24/2016

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

Sample Description: Gray to Dark Gray Sandy CLAY (A-6)
Remarks:

Test Number:
Liquid Limit: 32.0000
Plastic Limit: 16.0000
Specific Gravity: 2.6500
Assumed

Initial Void Ratio: 0.8225
Plasticity Index (%): 16.0000
Weight of Ring (g): 111.2000

Initial Height (in): 1.0000
Initial Diameter (in): 2.5000

Parameters	Initial Specimen	Final Specimen
Moist Weight + Container (g)	150.99	195.90
Dry Soil + Container (g)	127.08	168.12
Weight of Container (g)	49.95	50.04
Moisture Content (%)	30.90	23.53
Void Ratio	0.8225	0.6475
Saturation (%)	99.31	102.31
Dry Density (pcf)	90.67	102.79

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 1) Load 0.250 ksf

Project: R-1015 (site #5)

Location: EB2-B-ST-1 (3.7'-5.7')

WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016

Test Number:

Sample Number: ST-1

Boring Number: EB2-B

Depth: 3.7'-5.7'

Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

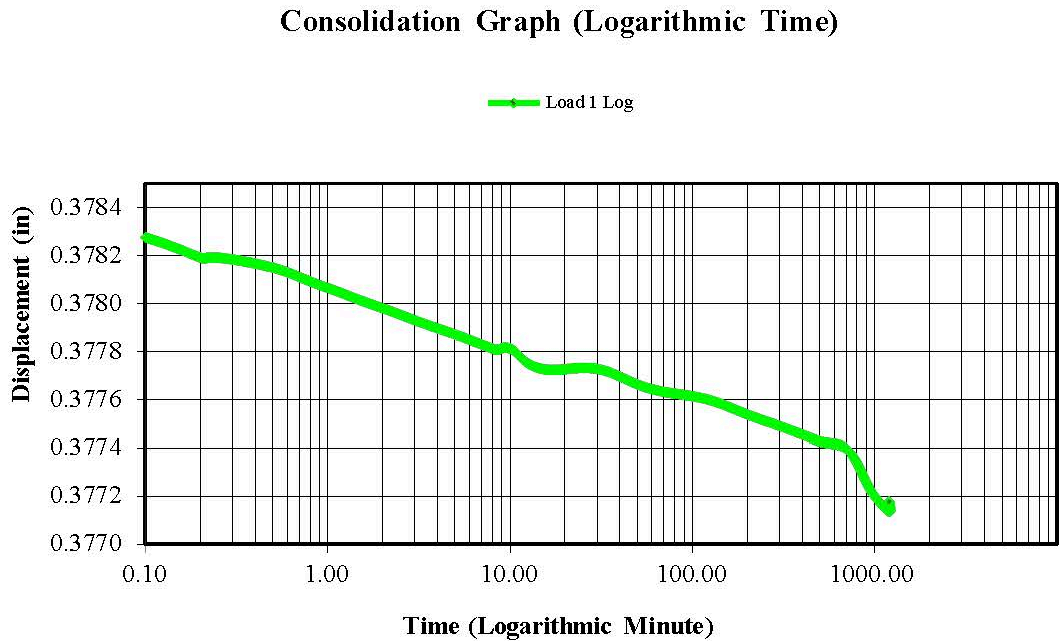
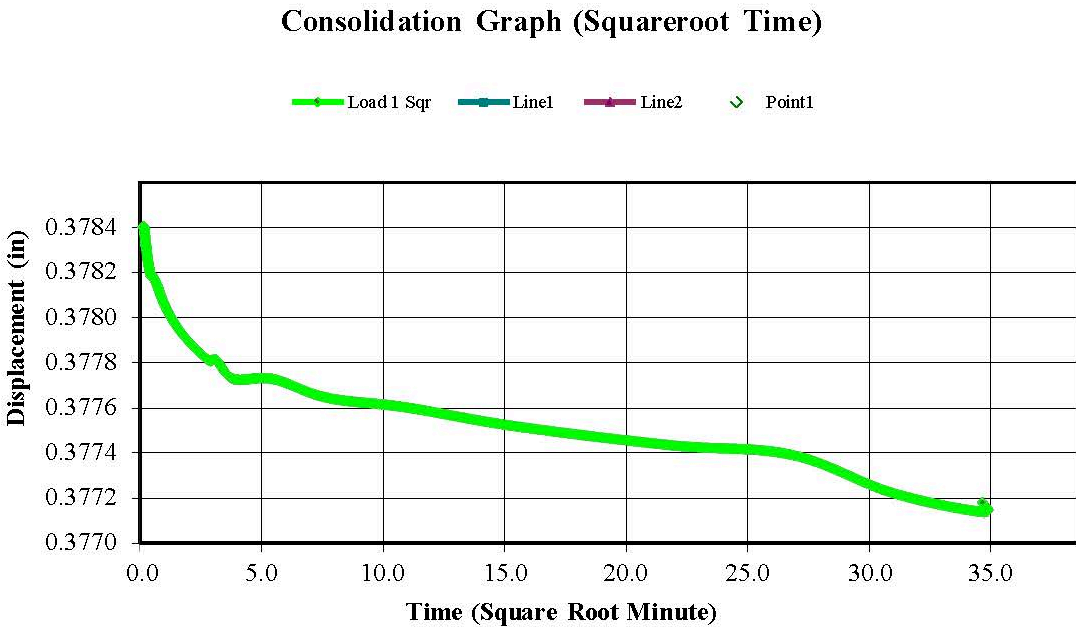
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3786	0.0000	0.0000	0.8225
1	00:00:01	0.3784	0.0002	0.0168	0.8222
2	00:00:02	0.3784	0.0002	0.0168	0.8222
3	00:00:03	0.3784	0.0002	0.0211	0.8221
4	00:00:04	0.3783	0.0003	0.0253	0.8220
5	00:00:05	0.3783	0.0003	0.0253	0.8220
6	00:00:06	0.3783	0.0003	0.0295	0.8220
7	00:00:12	0.3782	0.0004	0.0379	0.8218
8	00:00:15	0.3782	0.0004	0.0379	0.8218
9	00:00:30	0.3781	0.0004	0.0421	0.8217
10	00:01:00	0.3781	0.0005	0.0505	0.8216
11	00:02:00	0.3780	0.0006	0.0589	0.8214
12	00:04:01	0.3779	0.0007	0.0674	0.8213
13	00:08:01	0.3778	0.0008	0.0758	0.8211
14	00:10:01	0.3778	0.0008	0.0758	0.8211
15	00:15:01	0.3777	0.0008	0.0842	0.8210
16	00:30:02	0.3777	0.0008	0.0842	0.8210
17	01:00:04	0.3776	0.0009	0.0926	0.8208
18	02:00:07	0.3776	0.0010	0.0968	0.8207
19	04:00:14	0.3775	0.0011	0.1053	0.8206
20	08:00:27	0.3774	0.0011	0.1137	0.8204
21	12:00:40	0.3774	0.0012	0.1179	0.8203
22	16:00:53	0.3772	0.0013	0.1347	0.8200
23	20:01:07	0.3771	0.0014	0.1432	0.8199
24	20:05:24	0.3772	0.0014	0.1389	0.8200

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 1) Load 0.250 ksf



Consolidation Test Results

(Sequence 2) Load 0.500 ksf

Project:

R-1015 (site #5)

Location:

EB2-B-ST-1 (3.7'-5.7')

WBS No.:

34360.1.1

Project Number:

CS34.325

Test Date:

6/24/2016

Test Number:

Sample Number:

ST-1

Soil Description:

Gray to Dark Gray Sandy CLAY (A-6)

Boring Number:

EB2-B

Depth:

3.7'-5.7'

Remarks:

Sample Type:

Undisturbed

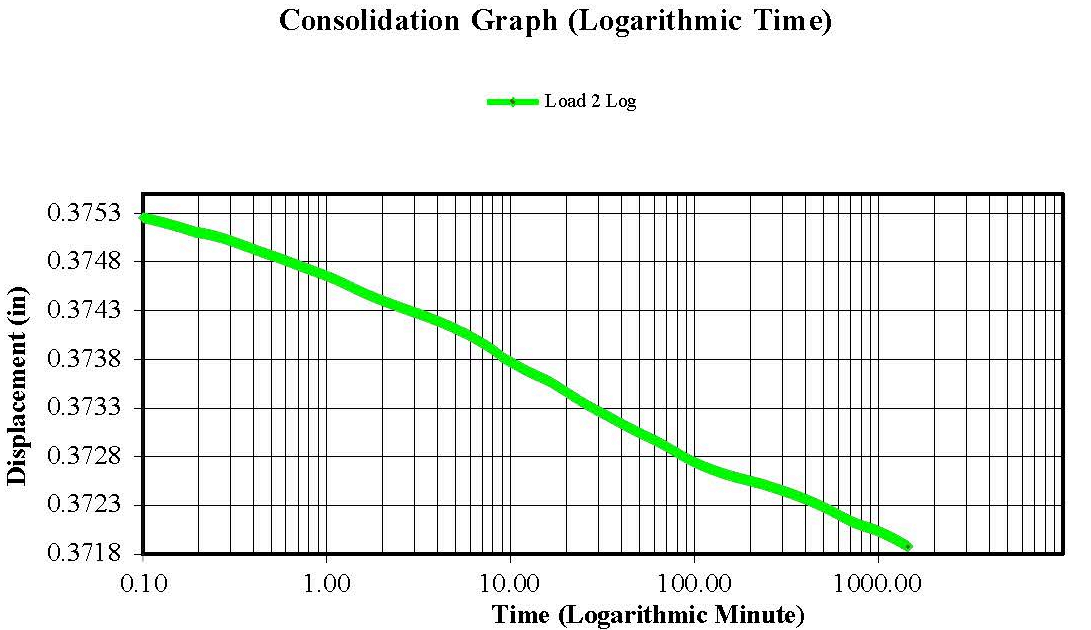
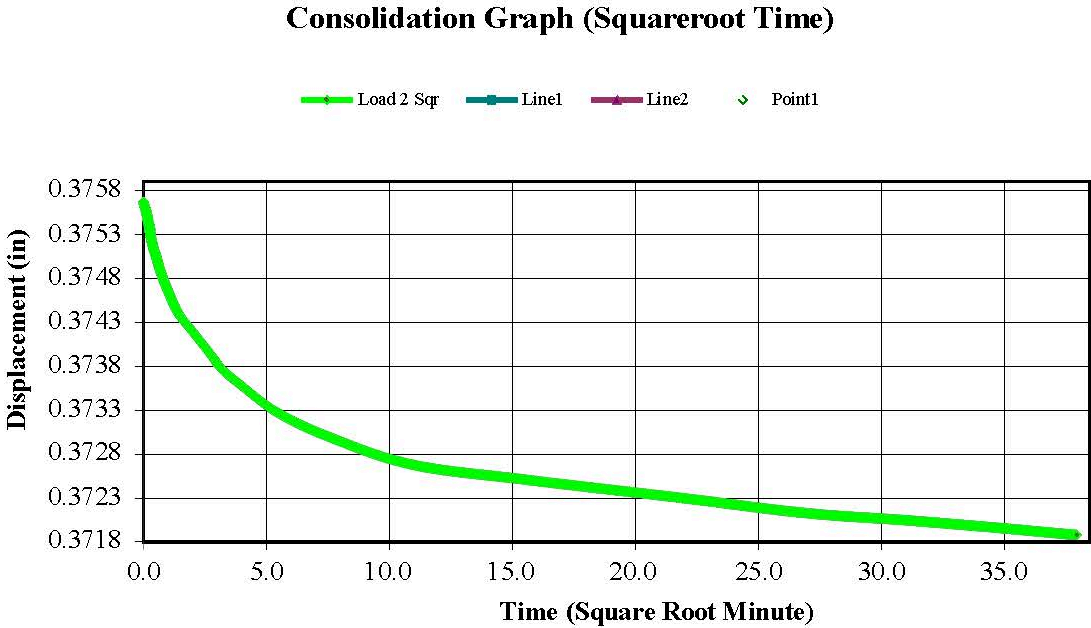
Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3772	0.0014	0.1389	0.8200
1	00:00:00	0.3757	0.0029	0.2905	0.8172
2	00:00:01	0.3755	0.0030	0.3032	0.8170
3	00:00:02	0.3755	0.0031	0.3116	0.8168
4	00:00:03	0.3754	0.0032	0.3158	0.8167
5	00:00:04	0.3754	0.0032	0.3200	0.8167
6	00:00:05	0.3753	0.0033	0.3284	0.8165
7	00:00:11	0.3751	0.0035	0.3453	0.8162
8	00:00:14	0.3751	0.0035	0.3495	0.8161
9	00:00:30	0.3749	0.0037	0.3705	0.8157
10	00:01:00	0.3747	0.0039	0.3916	0.8154
11	00:02:00	0.3744	0.0042	0.4168	0.8149
12	00:04:00	0.3742	0.0044	0.4379	0.8145
13	00:08:00	0.3739	0.0047	0.4674	0.8140
14	00:10:00	0.3738	0.0048	0.4800	0.8137
15	00:15:00	0.3736	0.0050	0.4968	0.8134
16	00:30:01	0.3733	0.0053	0.5305	0.8128
17	01:00:03	0.3730	0.0056	0.5600	0.8123
18	02:00:06	0.3727	0.0059	0.5895	0.8117
19	04:00:13	0.3725	0.0061	0.6063	0.8114
20	08:00:26	0.3723	0.0063	0.6274	0.8111
21	12:00:39	0.3721	0.0064	0.6442	0.8107
22	16:00:53	0.3720	0.0065	0.6526	0.8106
23	20:01:06	0.3720	0.0066	0.6611	0.8104
24	23:59:57	0.3719	0.0067	0.6695	0.8103

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results

(Sequence 2) Load 0.500 ksf



Consolidation Test Results
(Sequence 3) Load 1.000 ksf

Project: R-1015 (site #5)

Location: EB2-B-ST-1 (3.7'-5.7')

WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016

Test Number:

Sample Number: ST-1

Boring Number: EB2-B

Depth: 3.7'-5.7'

Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

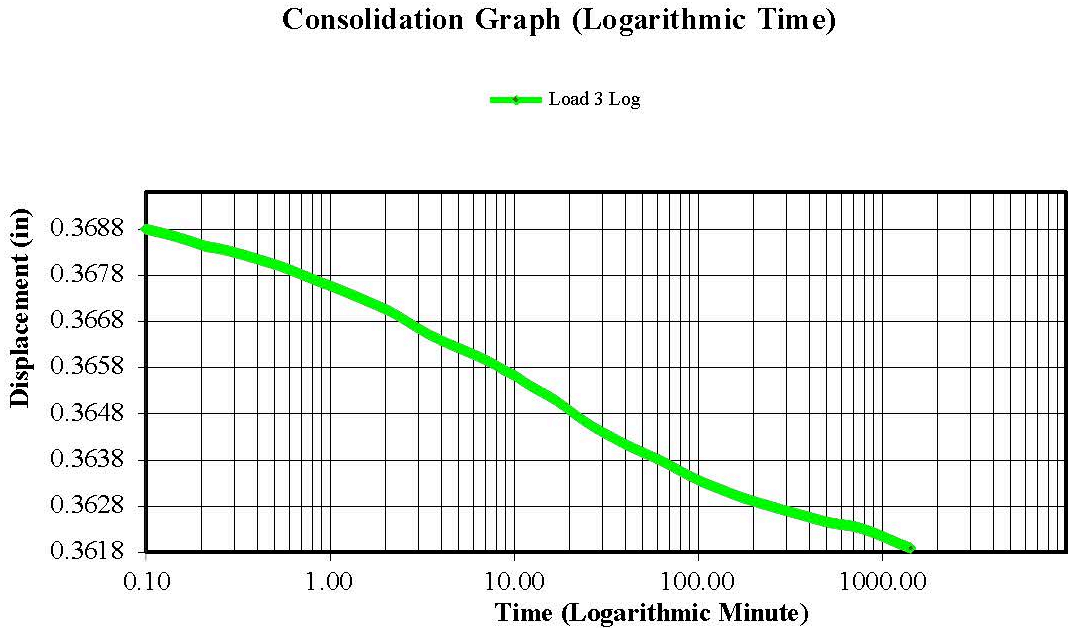
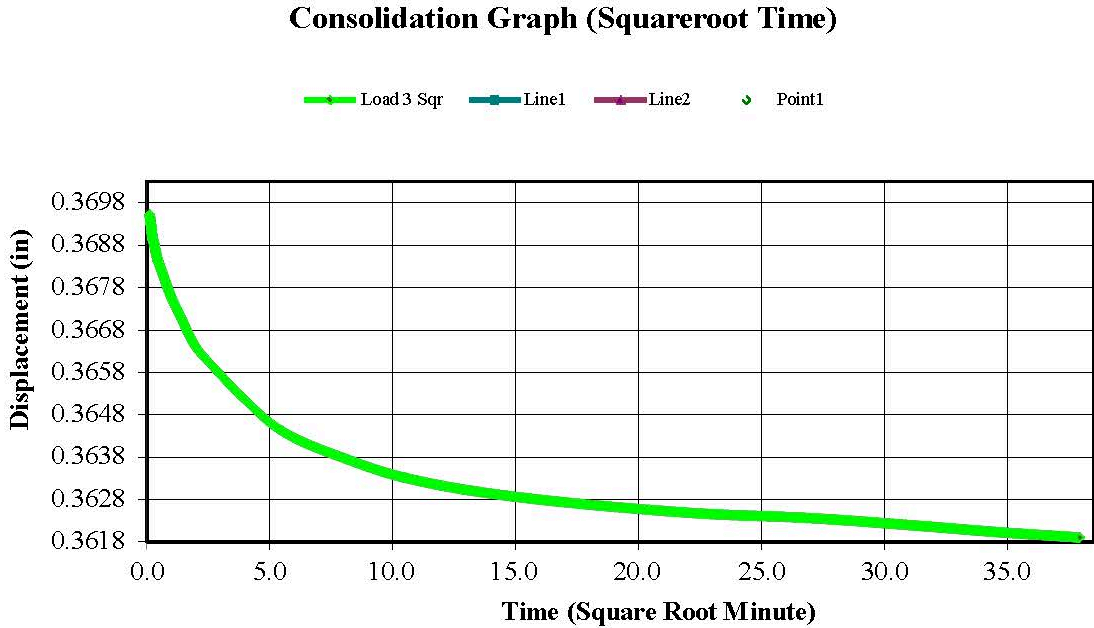
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3719	0.0067	0.6695	0.8103
1	00:00:01	0.3695	0.0091	0.9053	0.8060
2	00:00:02	0.3693	0.0093	0.9305	0.8055
3	00:00:03	0.3691	0.0095	0.9516	0.8051
4	00:00:04	0.3689	0.0096	0.9642	0.8049
5	00:00:05	0.3689	0.0097	0.9684	0.8048
6	00:00:06	0.3688	0.0098	0.9768	0.8047
7	00:00:12	0.3685	0.0101	1.0105	0.8041
8	00:00:15	0.3684	0.0102	1.0189	0.8039
9	00:00:30	0.3680	0.0105	1.0526	0.8033
10	00:01:00	0.3676	0.0110	1.0989	0.8025
11	00:02:00	0.3671	0.0115	1.1495	0.8015
12	00:04:00	0.3664	0.0122	1.2168	0.8003
13	00:08:01	0.3659	0.0127	1.2716	0.7993
14	00:10:01	0.3656	0.0129	1.2926	0.7989
15	00:15:01	0.3652	0.0133	1.3347	0.7982
16	00:30:02	0.3644	0.0141	1.4147	0.7967
17	01:00:04	0.3638	0.0147	1.4737	0.7956
18	02:00:07	0.3632	0.0153	1.5326	0.7946
19	04:00:14	0.3628	0.0157	1.5747	0.7938
20	08:00:27	0.3625	0.0161	1.6084	0.7932
21	12:00:40	0.3624	0.0162	1.6211	0.7929
22	16:00:53	0.3622	0.0164	1.6379	0.7926
23	20:01:07	0.3620	0.0165	1.6547	0.7923
24	23:59:58	0.3619	0.0167	1.6674	0.7921

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 3) Load 1.000 ksf



Consolidation Test Results
(Sequence 4) Load 2.000 ksf

Project: R-1015 (site #5)

Location: EB2-B-ST-1 (3.7'-5.7')

WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016

Test Number:

Sample Number: ST-1

Boring Number: EB2-B

Depth: 3.7'-5.7'

Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

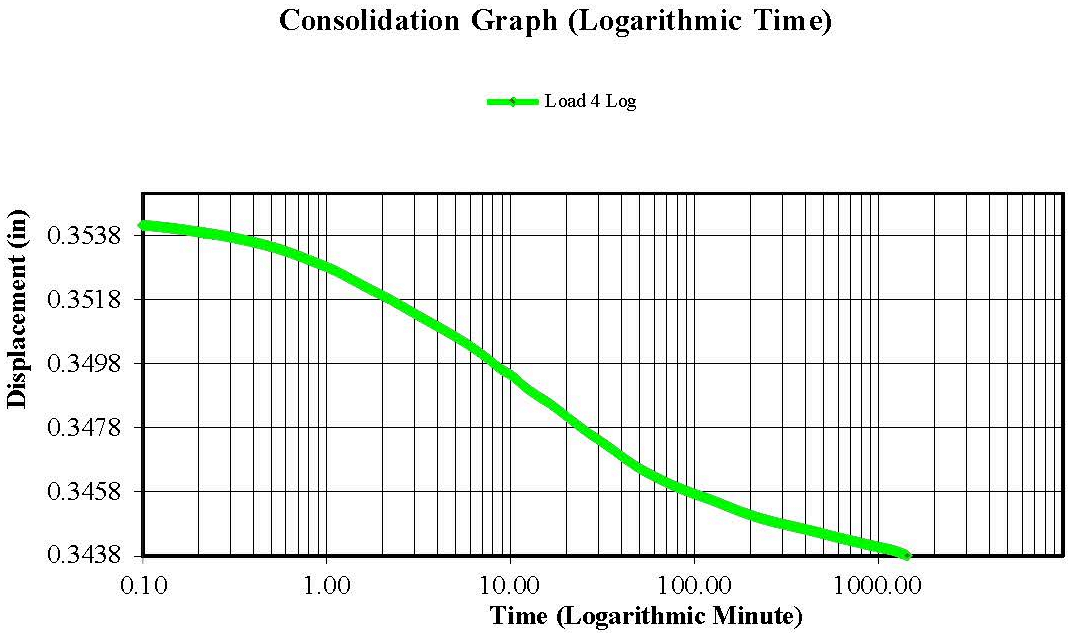
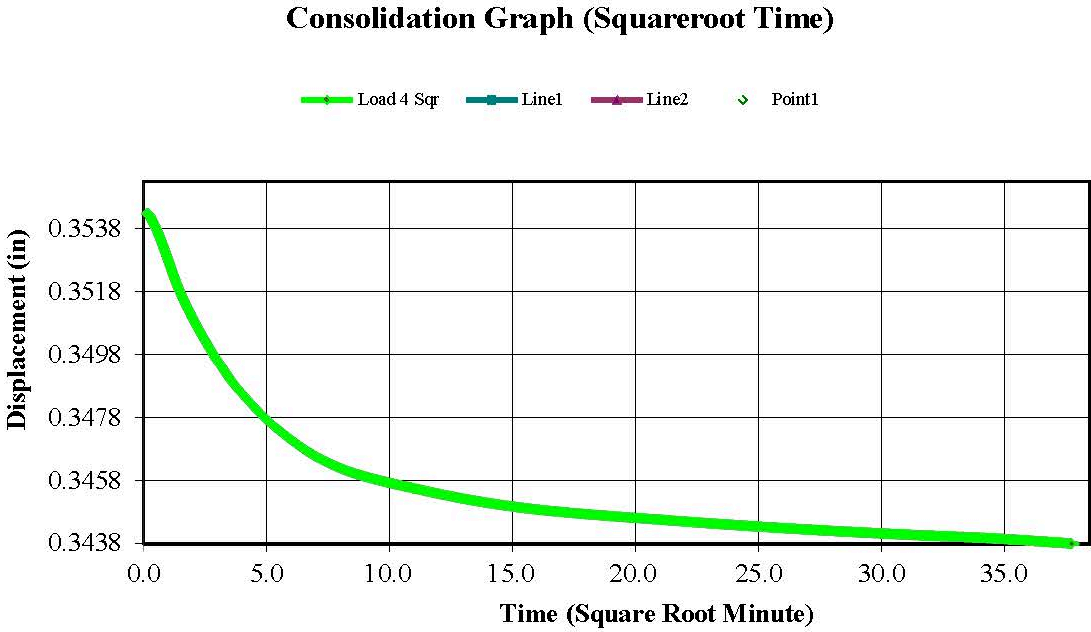
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3619	0.0167	1.6674	0.7921
1	00:00:01	0.3543	0.0243	2.4295	0.7782
2	00:00:02	0.3543	0.0243	2.4295	0.7782
3	00:00:03	0.3542	0.0243	2.4337	0.7781
4	00:00:04	0.3542	0.0244	2.4379	0.7781
5	00:00:05	0.3541	0.0244	2.4421	0.7780
6	00:00:06	0.3541	0.0245	2.4463	0.7779
7	00:00:12	0.3539	0.0247	2.4674	0.7775
8	00:00:15	0.3538	0.0248	2.4758	0.7774
9	00:00:30	0.3534	0.0251	2.5137	0.7767
10	00:01:00	0.3528	0.0258	2.5768	0.7755
11	00:02:00	0.3519	0.0267	2.6653	0.7739
12	00:04:00	0.3509	0.0276	2.7621	0.7722
13	00:08:00	0.3498	0.0288	2.8758	0.7701
14	00:10:01	0.3494	0.0291	2.9137	0.7694
15	00:15:01	0.3487	0.0299	2.9895	0.7680
16	00:30:02	0.3474	0.0312	3.1158	0.7657
17	01:00:03	0.3463	0.0323	3.2295	0.7636
18	02:00:07	0.3456	0.0330	3.3011	0.7623
19	04:00:13	0.3449	0.0336	3.3642	0.7612
20	08:00:26	0.3445	0.0341	3.4063	0.7604
21	12:00:40	0.3443	0.0343	3.4316	0.7599
22	16:00:53	0.3441	0.0345	3.4484	0.7596
23	20:01:06	0.3440	0.0346	3.4611	0.7594
24	23:59:56	0.3438	0.0348	3.4779	0.7591

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 4) Load 2.000 ksf



Consolidation Test Results
(Sequence 5) Rebound 1.000 ksf

Project: R-1015 (site #5)

Location: EB2-B-ST-1 (3.7'-5.7')

WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016

Test Number:

Sample Number: ST-1

Boring Number: EB2-B

Depth: 3.7'-5.7'

Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

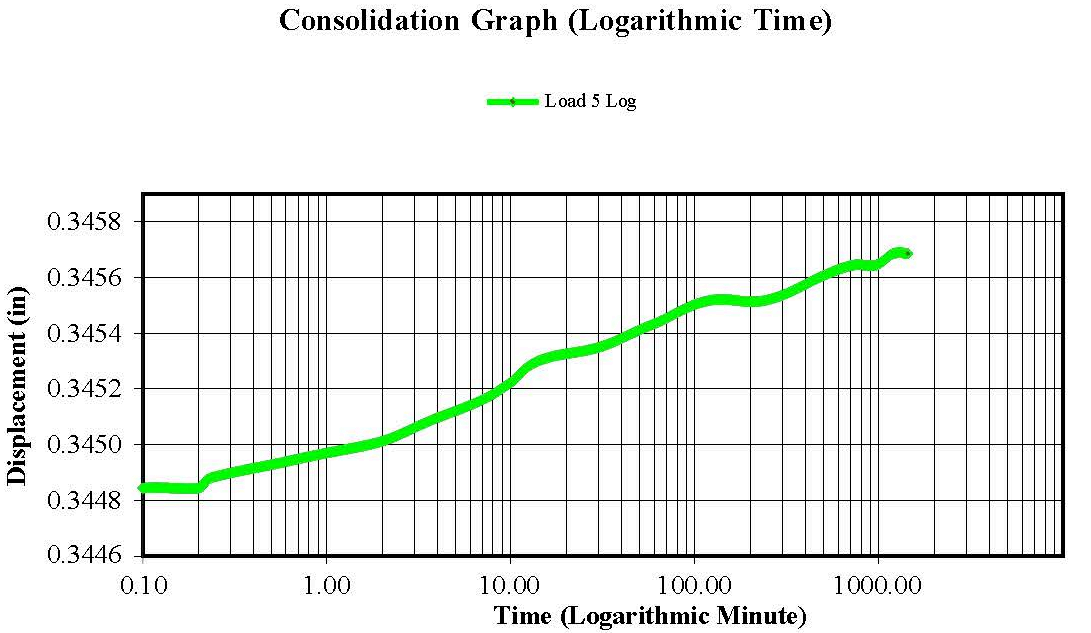
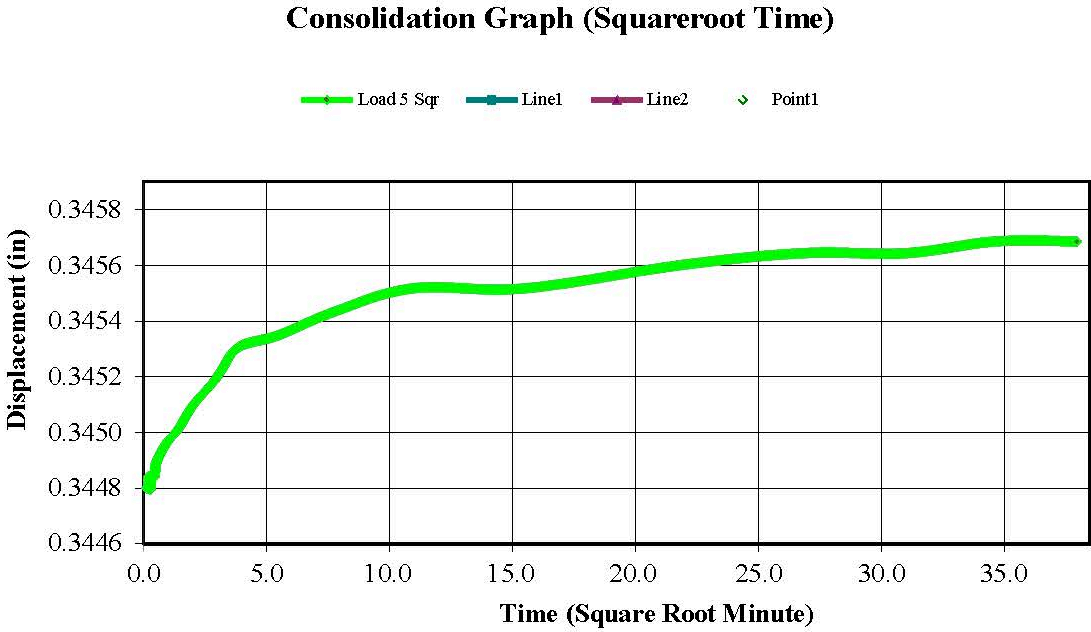
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3438	0.0348	3.4779	0.7591
1	00:00:01	0.3448	0.0338	3.3768	0.7609
2	00:00:02	0.3448	0.0338	3.3768	0.7609
3	00:00:03	0.3448	0.0337	3.3726	0.7610
4	00:00:04	0.3448	0.0338	3.3768	0.7609
5	00:00:05	0.3448	0.0338	3.3768	0.7609
6	00:00:06	0.3448	0.0337	3.3726	0.7610
7	00:00:12	0.3448	0.0337	3.3726	0.7610
8	00:00:15	0.3449	0.0337	3.3684	0.7611
9	00:00:30	0.3449	0.0336	3.3642	0.7612
10	00:01:00	0.3450	0.0336	3.3600	0.7613
11	00:02:00	0.3450	0.0336	3.3558	0.7613
12	00:04:00	0.3451	0.0335	3.3474	0.7615
13	00:08:01	0.3452	0.0334	3.3389	0.7616
14	00:10:01	0.3452	0.0333	3.3347	0.7617
15	00:15:01	0.3453	0.0333	3.3263	0.7619
16	00:30:02	0.3453	0.0332	3.3221	0.7619
17	01:00:04	0.3454	0.0331	3.3137	0.7621
18	02:00:07	0.3455	0.0331	3.3053	0.7623
19	04:00:14	0.3455	0.0331	3.3053	0.7623
20	08:00:27	0.3456	0.0330	3.2968	0.7624
21	12:00:40	0.3456	0.0329	3.2926	0.7625
22	16:00:53	0.3456	0.0329	3.2926	0.7625
23	20:01:07	0.3457	0.0329	3.2884	0.7626
24	23:59:57	0.3457	0.0329	3.2884	0.7626

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 5) Rebound 1.000 ksf



Consolidation Test Results
(Sequence 6) Rebound 0.500 ksf

Project: R-1015 (site #5)

Location: EB2-B-ST-1 (3.7'-5.7')

WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016

Test Number:

Sample Number: ST-1

Boring Number: EB2-B

Depth: 3.7'-5.7'

Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

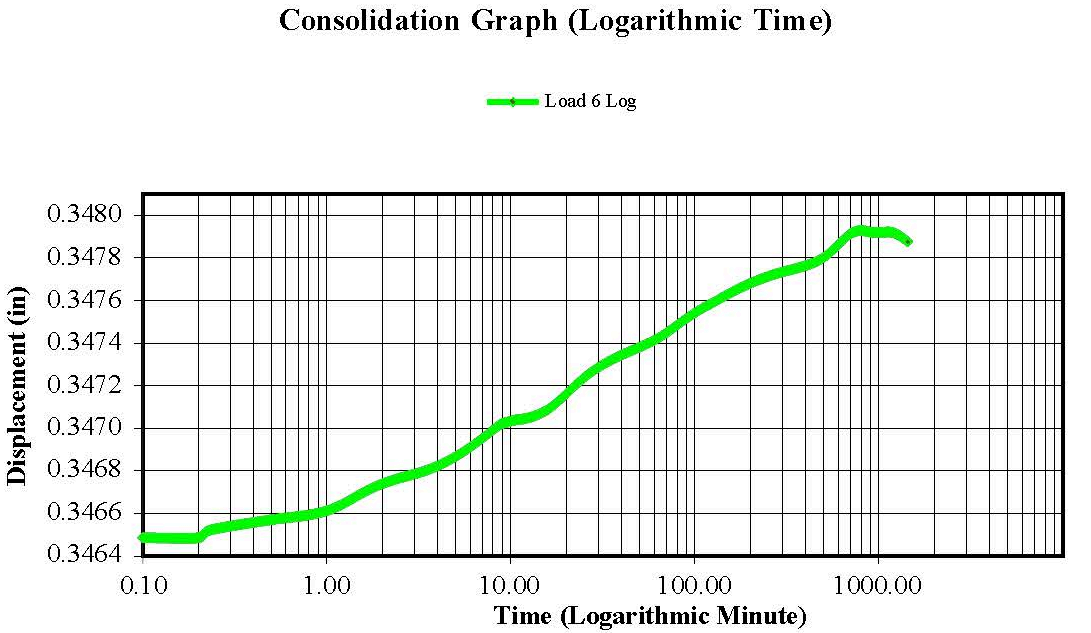
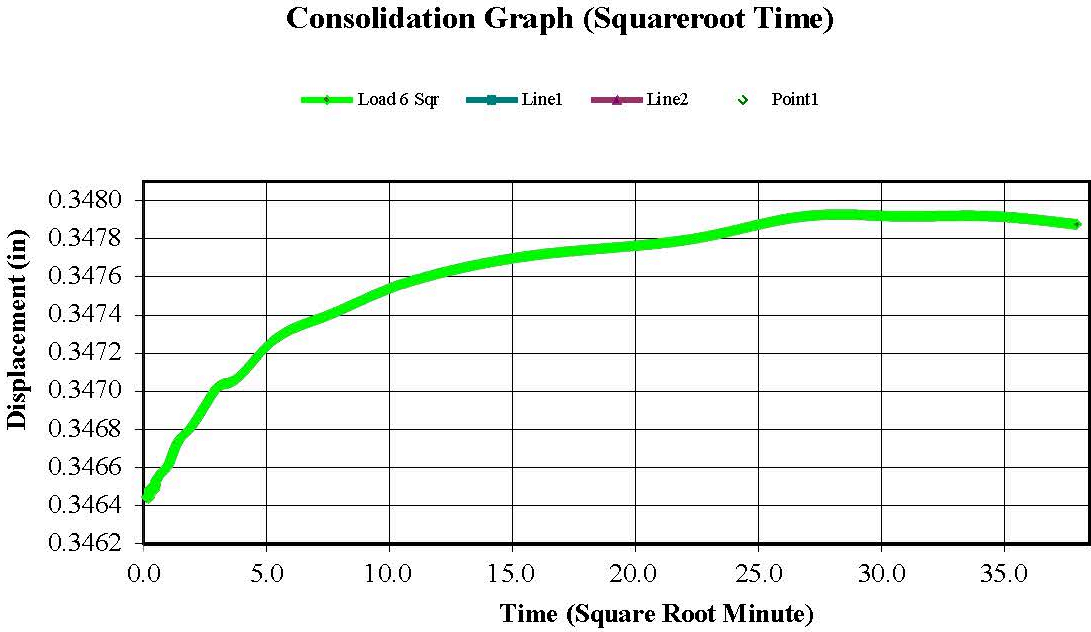
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3457	0.0329	3.2884	0.7626
1	00:00:01	0.3464	0.0321	3.2126	0.7639
2	00:00:02	0.3464	0.0321	3.2126	0.7639
3	00:00:03	0.3464	0.0321	3.2126	0.7639
4	00:00:04	0.3465	0.0321	3.2084	0.7640
5	00:00:05	0.3465	0.0321	3.2084	0.7640
6	00:00:06	0.3465	0.0321	3.2084	0.7640
7	00:00:12	0.3465	0.0321	3.2084	0.7640
8	00:00:15	0.3465	0.0320	3.2042	0.7641
9	00:00:30	0.3466	0.0320	3.2000	0.7642
10	00:01:00	0.3466	0.0320	3.1958	0.7642
11	00:02:00	0.3467	0.0318	3.1832	0.7645
12	00:04:00	0.3468	0.0317	3.1747	0.7646
13	00:08:00	0.3470	0.0316	3.1579	0.7649
14	00:10:01	0.3470	0.0315	3.1537	0.7650
15	00:15:01	0.3471	0.0315	3.1495	0.7651
16	00:30:02	0.3473	0.0313	3.1284	0.7655
17	01:00:03	0.3474	0.0312	3.1158	0.7657
18	02:00:07	0.3476	0.0310	3.0989	0.7660
19	04:00:13	0.3477	0.0309	3.0863	0.7662
20	08:00:26	0.3478	0.0308	3.0779	0.7664
21	12:00:40	0.3479	0.0307	3.0653	0.7666
22	16:00:53	0.3479	0.0307	3.0653	0.7666
23	20:01:06	0.3479	0.0307	3.0653	0.7666
24	23:59:57	0.3479	0.0307	3.0695	0.7665

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 6) Rebound 0.500 ksf



Consolidation Test Results
(Sequence 7) Load 1.000 ksf

Project: R-1015 (site #5)

Location: EB2-B-ST-1 (3.7'-5.7')

WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016

Test Number:

Sample Number: ST-1

Boring Number: EB2-B

Depth: 3.7'-5.7'

Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

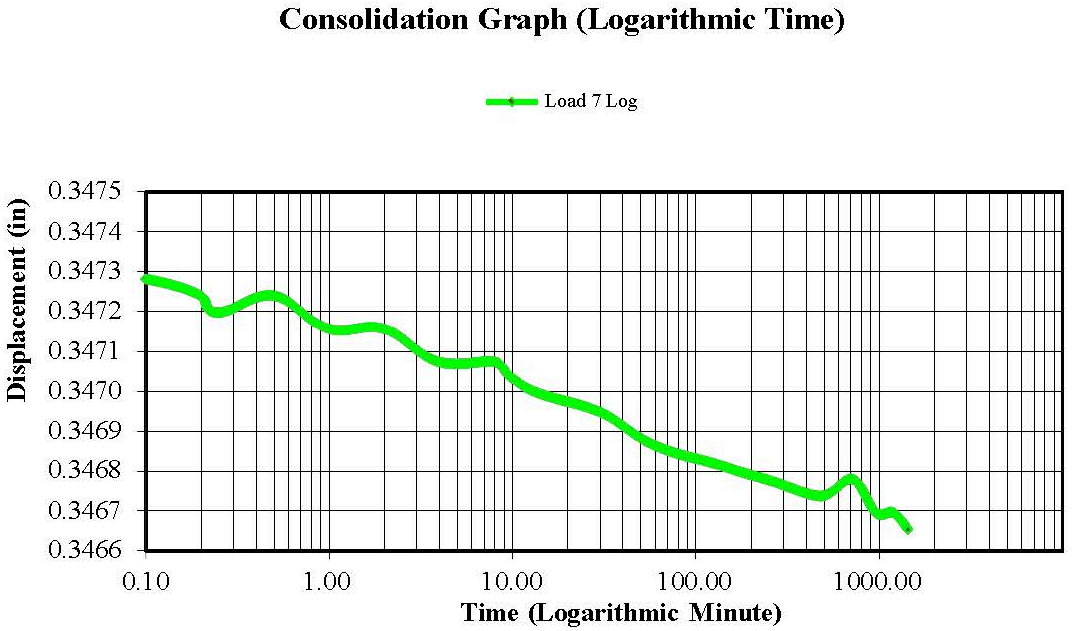
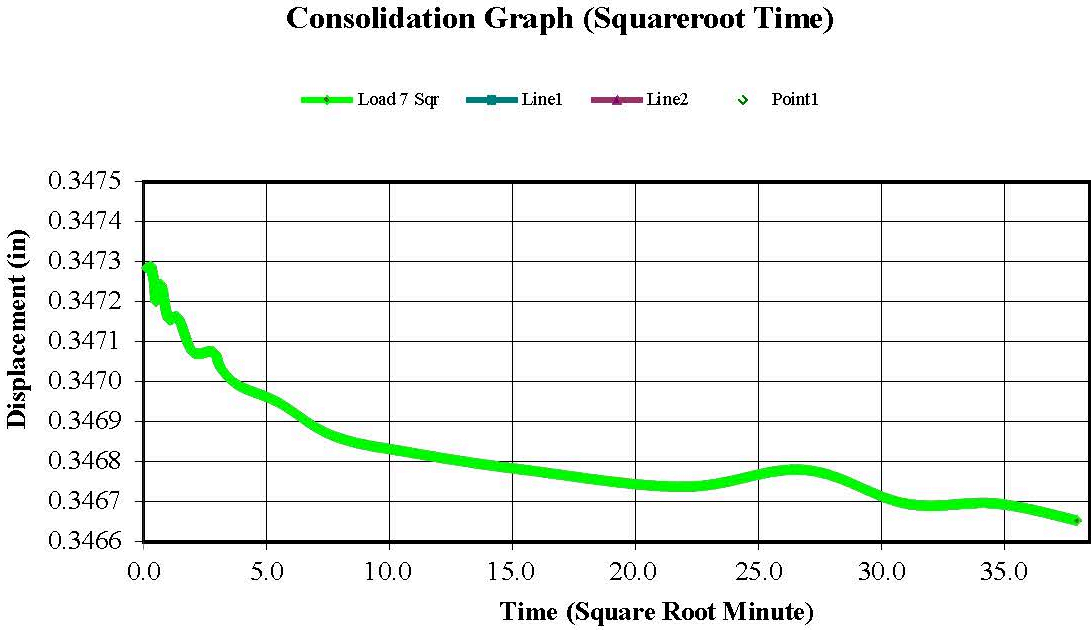
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3479	0.0307	3.0695	0.7665
1	00:00:01	0.3473	0.0313	3.1284	0.7655
2	00:00:02	0.3473	0.0313	3.1284	0.7655
3	00:00:03	0.3473	0.0313	3.1284	0.7655
4	00:00:04	0.3473	0.0313	3.1284	0.7655
5	00:00:05	0.3473	0.0313	3.1284	0.7655
6	00:00:06	0.3473	0.0313	3.1284	0.7655
7	00:00:12	0.3472	0.0313	3.1326	0.7654
8	00:00:15	0.3472	0.0314	3.1368	0.7653
9	00:00:30	0.3472	0.0313	3.1326	0.7654
10	00:01:00	0.3472	0.0314	3.1411	0.7652
11	00:02:00	0.3472	0.0314	3.1411	0.7652
12	00:04:00	0.3471	0.0315	3.1495	0.7651
13	00:08:00	0.3471	0.0315	3.1495	0.7651
14	00:10:00	0.3470	0.0315	3.1537	0.7650
15	00:15:01	0.3470	0.0316	3.1579	0.7649
16	00:30:02	0.3469	0.0316	3.1621	0.7649
17	01:00:03	0.3469	0.0317	3.1705	0.7647
18	02:00:07	0.3468	0.0317	3.1747	0.7646
19	04:00:13	0.3468	0.0318	3.1789	0.7646
20	08:00:26	0.3467	0.0318	3.1832	0.7645
21	12:00:40	0.3468	0.0318	3.1789	0.7646
22	16:00:53	0.3467	0.0319	3.1874	0.7644
23	20:01:06	0.3467	0.0319	3.1874	0.7644
24	23:59:58	0.3467	0.0319	3.1916	0.7643

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 7) Load 1.000 ksf



Consolidation Test Results
(Sequence 8) Rebound 0.500 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325
Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

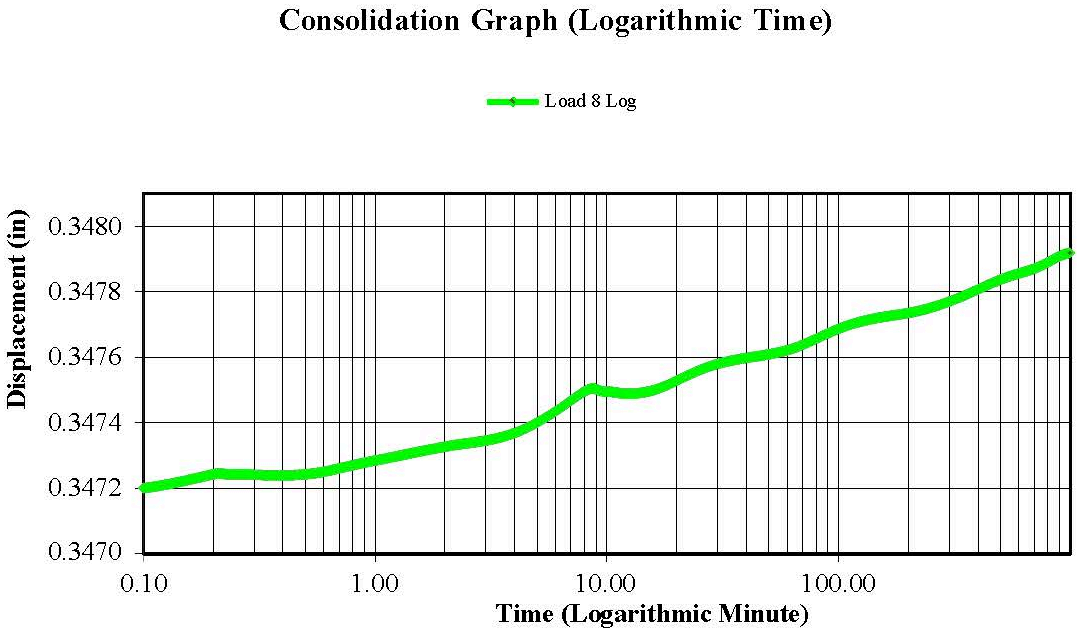
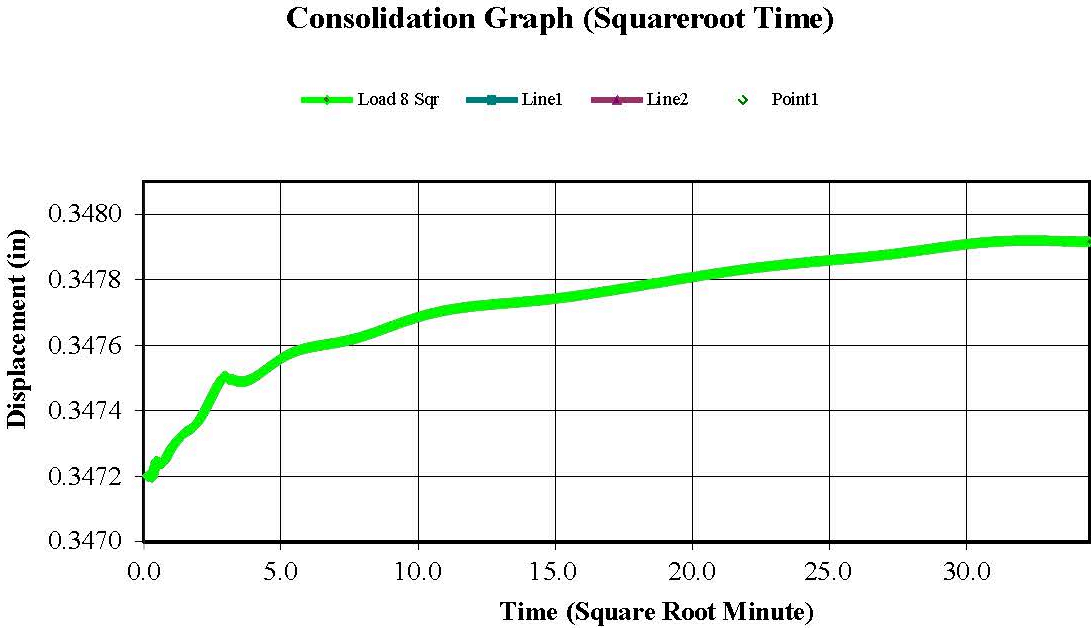
Soil Description: Gray to Dark Gray Sandy CLAY (A-6)
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3467	0.0319	3.1916	0.7643
1	00:00:01	0.3472	0.0314	3.1368	0.7653
2	00:00:02	0.3472	0.0314	3.1368	0.7653
3	00:00:03	0.3472	0.0314	3.1368	0.7653
4	00:00:04	0.3472	0.0314	3.1368	0.7653
5	00:00:05	0.3472	0.0314	3.1368	0.7653
6	00:00:06	0.3472	0.0314	3.1368	0.7653
7	00:00:12	0.3472	0.0313	3.1326	0.7654
8	00:00:15	0.3472	0.0313	3.1326	0.7654
9	00:00:30	0.3472	0.0313	3.1326	0.7654
10	00:01:00	0.3473	0.0313	3.1284	0.7655
11	00:02:00	0.3473	0.0312	3.1242	0.7656
12	00:04:00	0.3474	0.0312	3.1200	0.7656
13	00:08:00	0.3475	0.0311	3.1074	0.7659
14	00:10:00	0.3475	0.0311	3.1074	0.7659
15	00:15:01	0.3475	0.0311	3.1074	0.7659
16	00:30:01	0.3476	0.0310	3.0989	0.7660
17	01:00:03	0.3476	0.0309	3.0947	0.7661
18	02:00:06	0.3477	0.0309	3.0863	0.7662
19	04:00:13	0.3477	0.0308	3.0821	0.7663
20	08:00:26	0.3478	0.0307	3.0737	0.7665
21	12:00:40	0.3479	0.0307	3.0695	0.7665
22	16:00:53	0.3479	0.0307	3.0653	0.7666
23	20:01:06	0.3479	0.0307	3.0653	0.7666
24	23:59:57	0.3479	0.0307	3.0653	0.7666

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 8) Rebound 0.500 ksf



Consolidation Test Results
(Sequence 9) Load 1.000 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325
Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

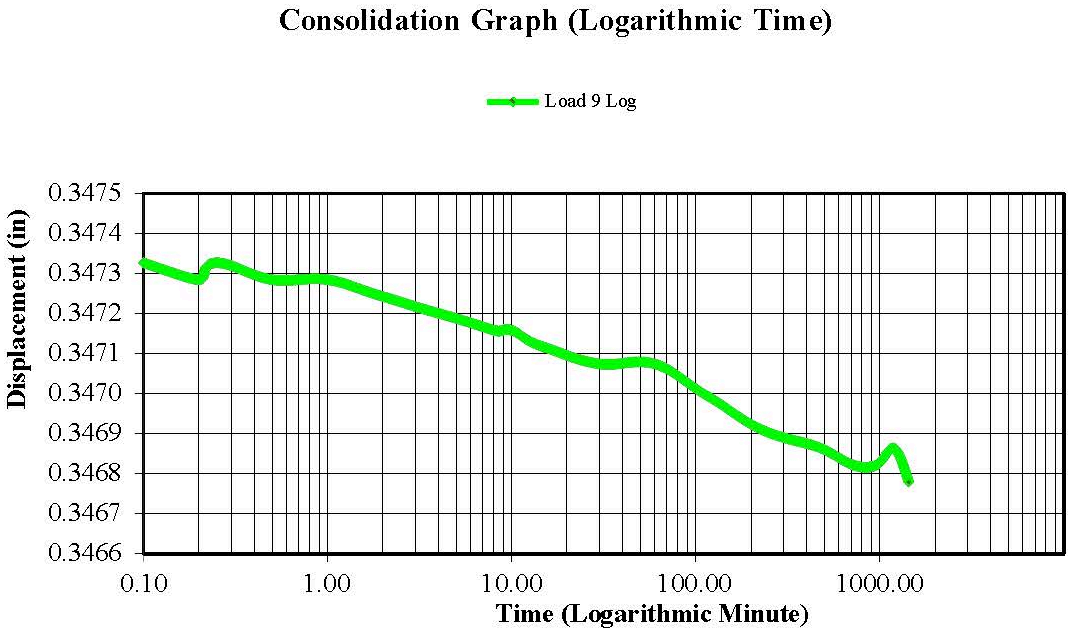
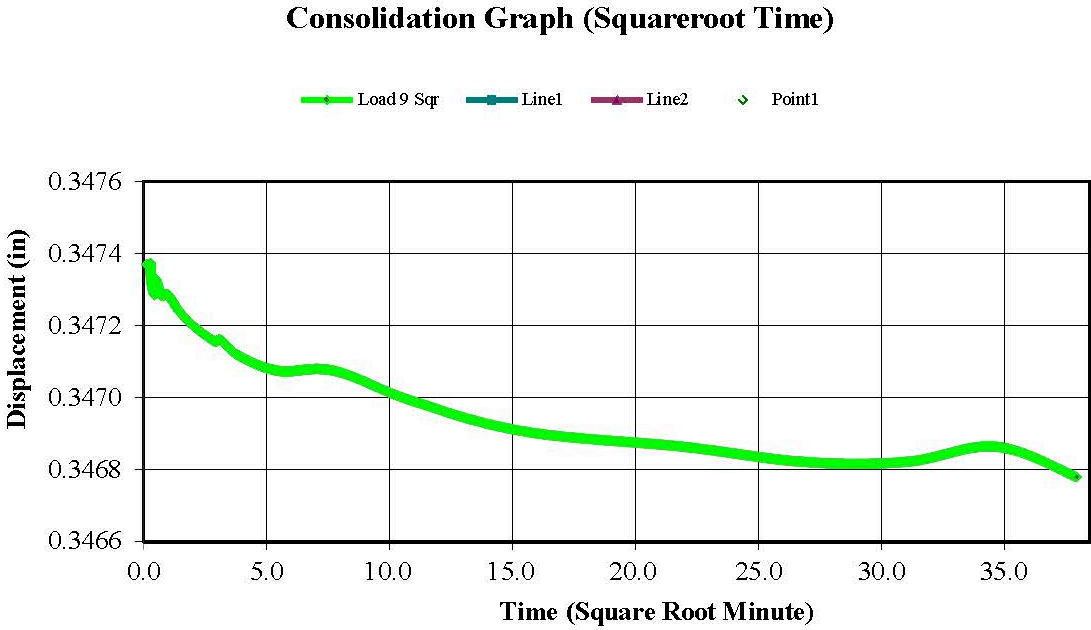
Soil Description: Gray to Dark Gray Sandy CLAY (A-6)
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3479	0.0307	3.0653	0.7666
1	00:00:01	0.3474	0.0312	3.1200	0.7656
2	00:00:02	0.3474	0.0312	3.1200	0.7656
3	00:00:03	0.3474	0.0312	3.1200	0.7656
4	00:00:04	0.3474	0.0312	3.1200	0.7656
5	00:00:05	0.3474	0.0312	3.1200	0.7656
6	00:00:06	0.3473	0.0312	3.1242	0.7656
7	00:00:12	0.3473	0.0313	3.1284	0.7655
8	00:00:15	0.3473	0.0312	3.1242	0.7656
9	00:00:30	0.3473	0.0313	3.1284	0.7655
10	00:01:00	0.3473	0.0313	3.1284	0.7655
11	00:02:00	0.3472	0.0313	3.1326	0.7654
12	00:04:01	0.3472	0.0314	3.1368	0.7653
13	00:08:01	0.3472	0.0314	3.1411	0.7652
14	00:10:01	0.3472	0.0314	3.1411	0.7652
15	00:15:01	0.3471	0.0315	3.1453	0.7652
16	00:30:02	0.3471	0.0315	3.1495	0.7651
17	01:00:04	0.3471	0.0315	3.1495	0.7651
18	02:00:07	0.3470	0.0316	3.1579	0.7649
19	04:00:14	0.3469	0.0317	3.1663	0.7648
20	08:00:27	0.3469	0.0317	3.1705	0.7647
21	12:00:40	0.3468	0.0317	3.1747	0.7646
22	16:00:53	0.3468	0.0317	3.1747	0.7646
23	20:01:07	0.3469	0.0317	3.1705	0.7647
24	23:59:58	0.3468	0.0318	3.1789	0.7646

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 9) Load 1.000 ksf



Consolidation Test Results
(Sequence 10) Load 2.000 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325
Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

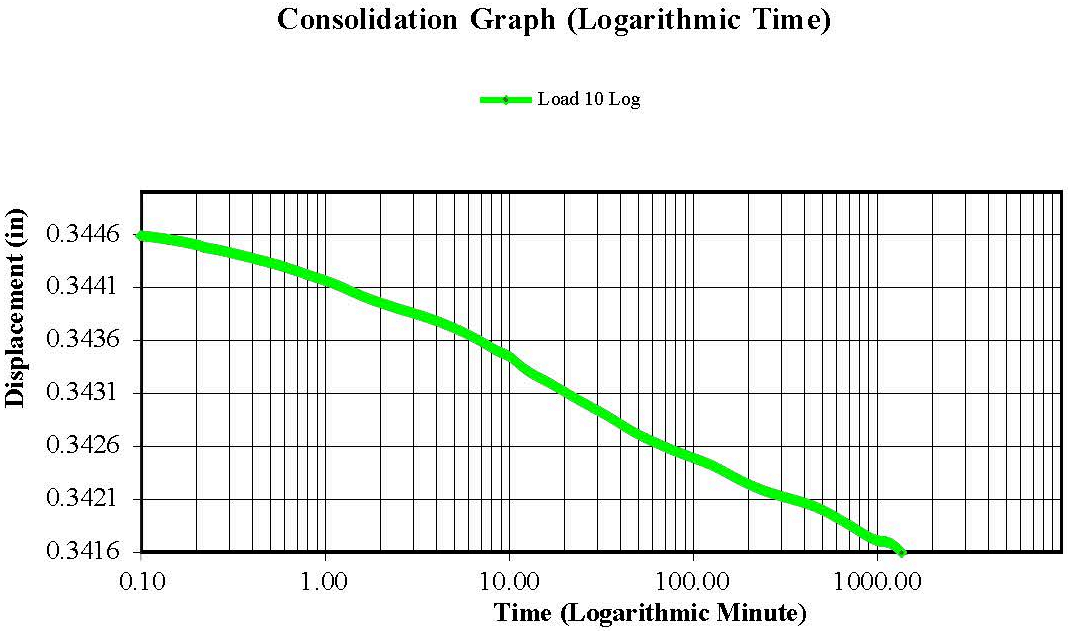
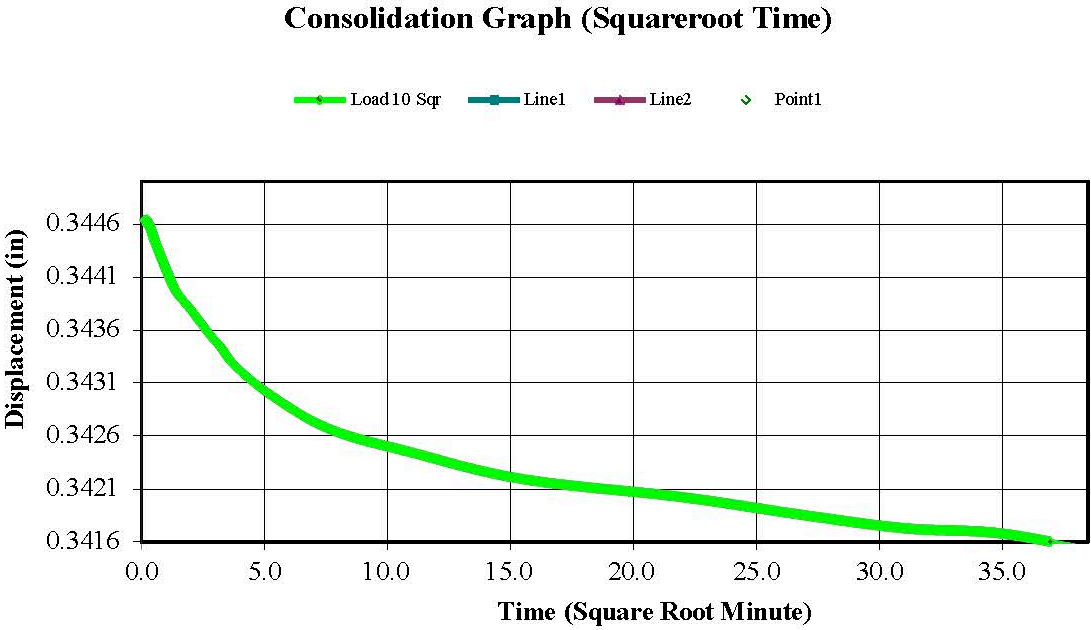
Soil Description: Gray to Dark Gray Sandy CLAY (A-6)
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3468	0.0318	3.1789	0.7646
1	00:00:01	0.3446	0.0339	3.3937	0.7606
2	00:00:02	0.3446	0.0339	3.3937	0.7606
3	00:00:03	0.3446	0.0339	3.3937	0.7606
4	00:00:04	0.3446	0.0340	3.3979	0.7606
5	00:00:05	0.3446	0.0340	3.3979	0.7606
6	00:00:06	0.3446	0.0340	3.3979	0.7606
7	00:00:12	0.3445	0.0341	3.4063	0.7604
8	00:00:15	0.3445	0.0341	3.4105	0.7603
9	00:00:30	0.3443	0.0342	3.4232	0.7601
10	00:01:00	0.3442	0.0344	3.4400	0.7598
11	00:02:00	0.3440	0.0346	3.4611	0.7594
12	00:04:00	0.3438	0.0348	3.4779	0.7591
13	00:08:01	0.3435	0.0350	3.5032	0.7586
14	00:10:01	0.3435	0.0351	3.5116	0.7585
15	00:15:01	0.3432	0.0353	3.5326	0.7581
16	00:30:02	0.3429	0.0356	3.5621	0.7576
17	01:00:03	0.3427	0.0359	3.5916	0.7570
18	02:00:07	0.3424	0.0361	3.6126	0.7566
19	04:00:13	0.3422	0.0364	3.6379	0.7562
20	08:00:27	0.3420	0.0365	3.6547	0.7559
21	12:00:40	0.3419	0.0367	3.6716	0.7556
22	16:00:53	0.3417	0.0368	3.6842	0.7553
23	20:01:06	0.3417	0.0369	3.6884	0.7553
24	23:59:58	0.3416	0.0370	3.7011	0.7550

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 10) Load 2.000 ksf



Consolidation Test Results
(Sequence 11) Load 4.000 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325
Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

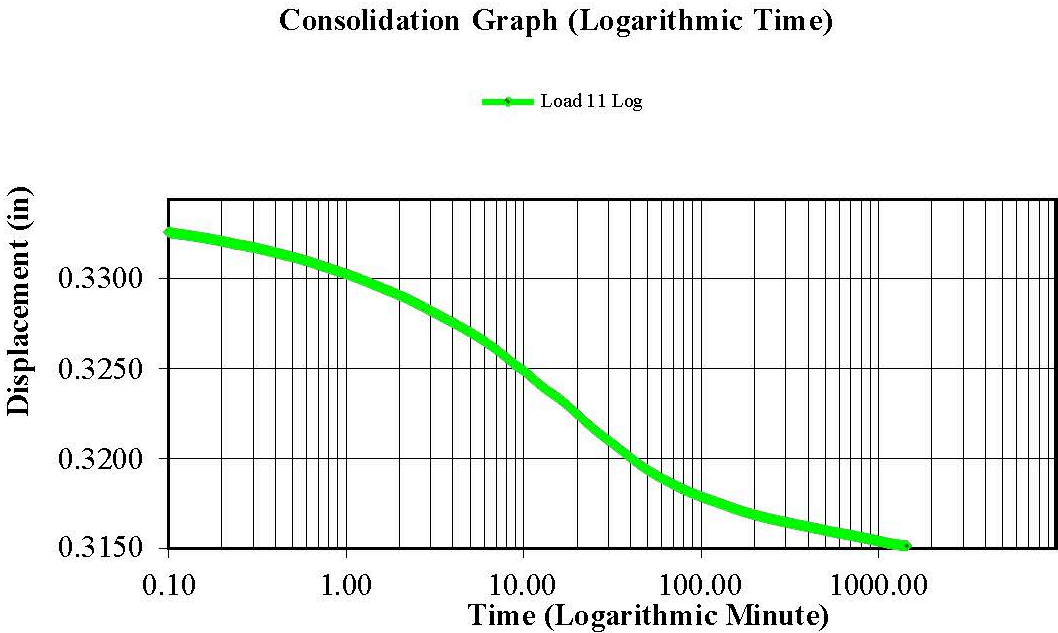
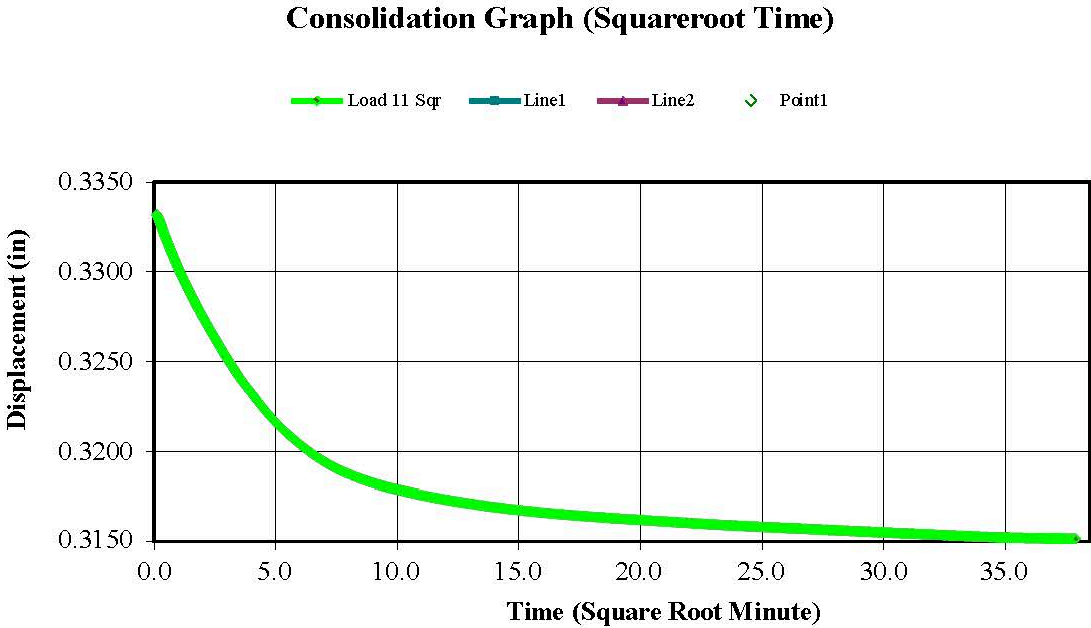
Soil Description: Gray to Dark Gray Sandy CLAY (A-6)
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3416	0.0370	3.7011	0.7550
1	00:00:01	0.3332	0.0454	4.5389	0.7398
2	00:00:03	0.3329	0.0456	4.5642	0.7393
3	00:00:04	0.3328	0.0458	4.5768	0.7391
4	00:00:05	0.3327	0.0459	4.5895	0.7388
5	00:00:06	0.3326	0.0460	4.5979	0.7387
6	00:00:07	0.3325	0.0461	4.6105	0.7385
7	00:00:13	0.3320	0.0466	4.6568	0.7376
8	00:00:16	0.3318	0.0467	4.6737	0.7373
9	00:00:31	0.3312	0.0474	4.7411	0.7361
10	00:01:01	0.3302	0.0483	4.8337	0.7344
11	00:02:01	0.3291	0.0495	4.9516	0.7322
12	00:04:01	0.3275	0.0510	5.1032	0.7295
13	00:08:01	0.3256	0.0530	5.2968	0.7260
14	00:10:01	0.3249	0.0537	5.3684	0.7247
15	00:15:02	0.3235	0.0551	5.5074	0.7221
16	00:30:02	0.3210	0.0576	5.7558	0.7176
17	01:00:04	0.3189	0.0597	5.9663	0.7138
18	02:00:07	0.3176	0.0610	6.0968	0.7114
19	04:00:14	0.3167	0.0619	6.1895	0.7097
20	08:00:27	0.3160	0.0625	6.2526	0.7085
21	12:00:41	0.3157	0.0629	6.2863	0.7079
22	16:00:54	0.3155	0.0631	6.3116	0.7075
23	20:01:07	0.3152	0.0633	6.3326	0.7071
24	23:59:59	0.3152	0.0634	6.3411	0.7069

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 11) Load 4.000 ksf



Consolidation Test Results
(Sequence 12) Load 8.000 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

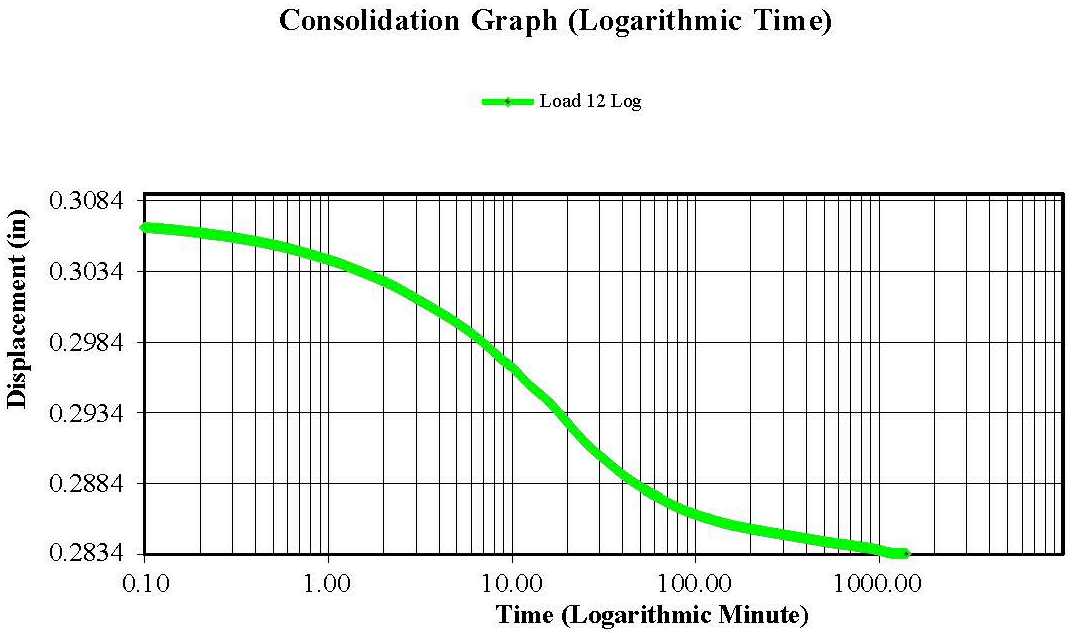
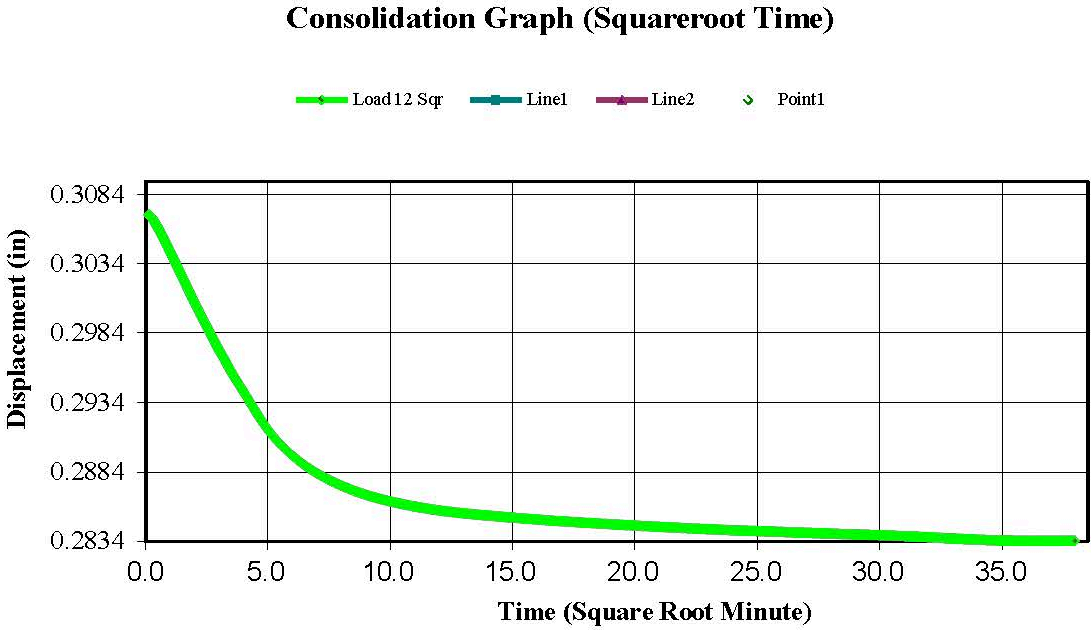
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.3152	0.0634	6.3411	0.7069
1	00:00:01	0.3069	0.0717	7.1663	0.6919
2	00:00:02	0.3068	0.0717	7.1747	0.6917
3	00:00:03	0.3067	0.0718	7.1832	0.6916
4	00:00:04	0.3067	0.0719	7.1874	0.6915
5	00:00:05	0.3066	0.0720	7.1958	0.6913
6	00:00:06	0.3065	0.0720	7.2042	0.6912
7	00:00:12	0.3061	0.0724	7.2421	0.6905
8	00:00:15	0.3060	0.0726	7.2589	0.6902
9	00:00:30	0.3053	0.0733	7.3263	0.6890
10	00:01:00	0.3043	0.0743	7.4316	0.6870
11	00:02:00	0.3027	0.0758	7.5832	0.6843
12	00:04:00	0.3006	0.0780	7.7979	0.6804
13	00:08:01	0.2977	0.0808	8.0842	0.6752
14	00:10:01	0.2967	0.0819	8.1895	0.6732
15	00:15:01	0.2945	0.0840	8.4042	0.6693
16	00:30:02	0.2904	0.0881	8.8126	0.6619
17	01:00:03	0.2876	0.0909	9.0947	0.6567
18	02:00:07	0.2859	0.0926	9.2632	0.6537
19	04:00:13	0.2851	0.0935	9.3516	0.6521
20	08:00:27	0.2844	0.0942	9.4189	0.6508
21	12:00:40	0.2840	0.0945	9.4526	0.6502
22	16:00:53	0.2838	0.0948	9.4779	0.6498
23	20:01:06	0.2835	0.0951	9.5074	0.6492
24	23:59:57	0.2835	0.0951	9.5116	0.6491

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 12) Load 8.000 ksf



Consolidation Test Results
(Sequence 13) Load 16.000 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325
Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

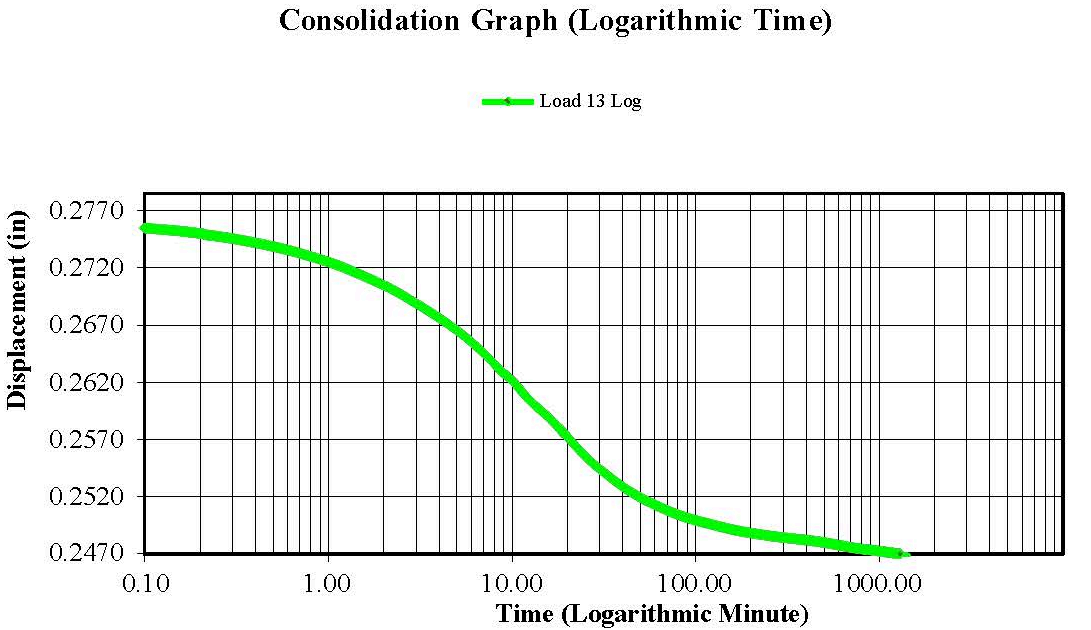
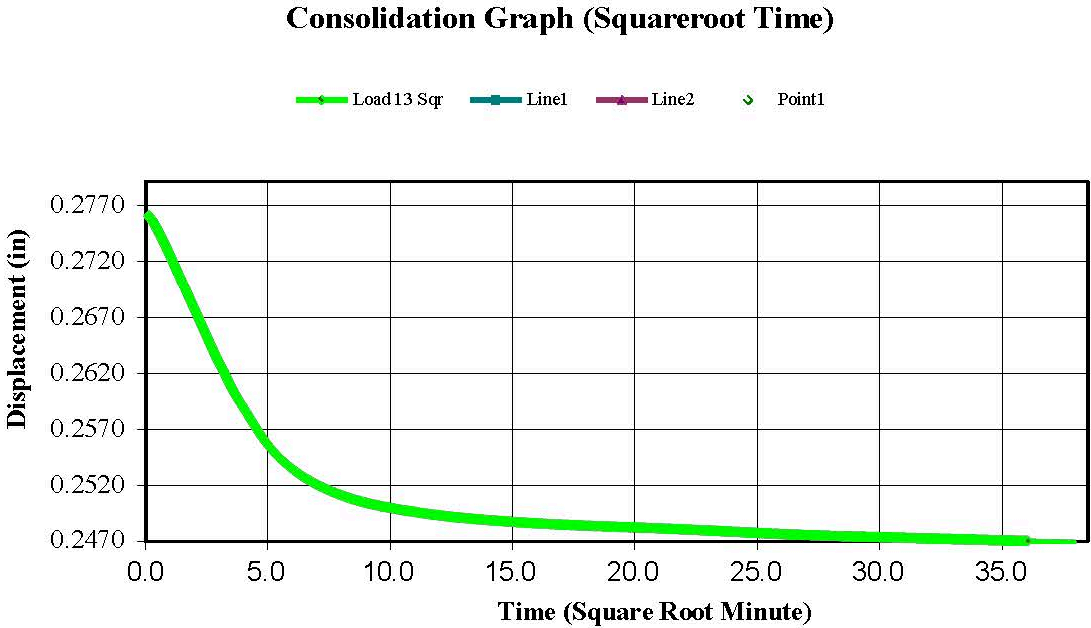
Soil Description: Gray to Dark Gray Sandy CLAY (A-6)
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.2835	0.0951	9.5116	0.6491
1	00:00:01	0.2761	0.1025	10.2484	0.6357
2	00:00:02	0.2759	0.1027	10.2653	0.6354
3	00:00:03	0.2758	0.1027	10.2737	0.6353
4	00:00:04	0.2757	0.1029	10.2863	0.6350
5	00:00:05	0.2756	0.1029	10.2947	0.6349
6	00:00:06	0.2755	0.1031	10.3074	0.6346
7	00:00:12	0.2750	0.1035	10.3537	0.6338
8	00:00:15	0.2748	0.1038	10.3789	0.6333
9	00:00:30	0.2739	0.1047	10.4674	0.6317
10	00:01:00	0.2725	0.1060	10.6021	0.6293
11	00:02:00	0.2705	0.1080	10.8042	0.6256
12	00:04:01	0.2677	0.1109	11.0905	0.6204
13	00:08:01	0.2637	0.1149	11.4905	0.6131
14	00:10:01	0.2622	0.1163	11.6337	0.6105
15	00:15:01	0.2593	0.1192	11.9242	0.6052
16	00:30:02	0.2544	0.1242	12.4168	0.5962
17	01:00:04	0.2513	0.1273	12.7284	0.5905
18	02:00:07	0.2496	0.1290	12.8968	0.5874
19	04:00:14	0.2486	0.1299	12.9937	0.5857
20	08:00:27	0.2480	0.1305	13.0526	0.5846
21	12:00:40	0.2475	0.1310	13.1032	0.5837
22	16:00:53	0.2473	0.1313	13.1284	0.5832
23	20:01:07	0.2471	0.1315	13.1495	0.5828
24	23:59:58	0.2469	0.1317	13.1663	0.5825

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 13) Load 16.000 ksf



Consolidation Test Results
(Sequence 14) Rebound 8.000 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

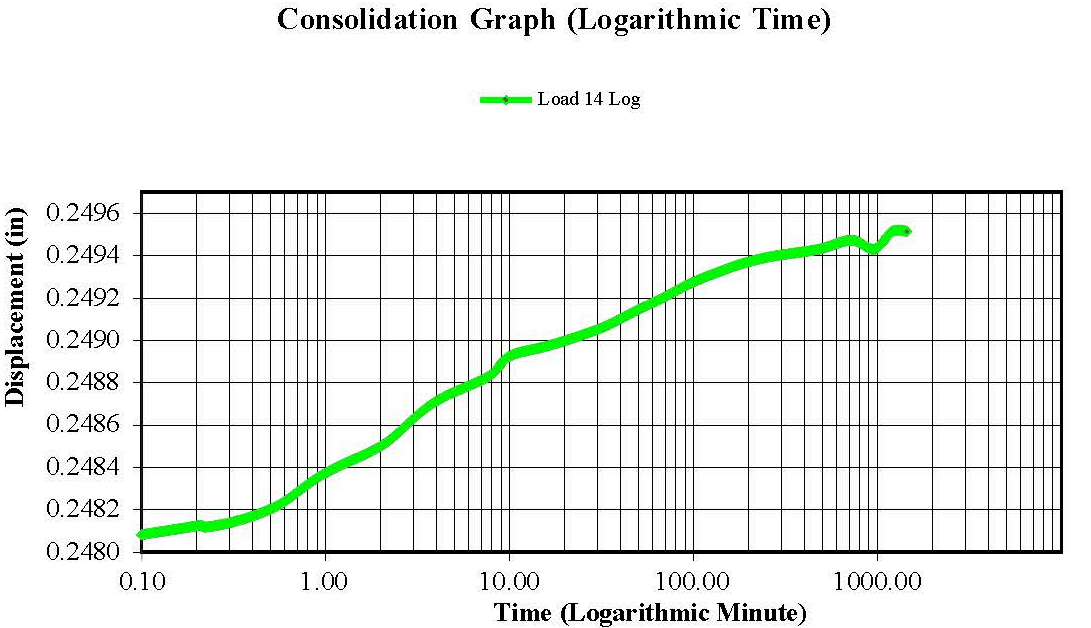
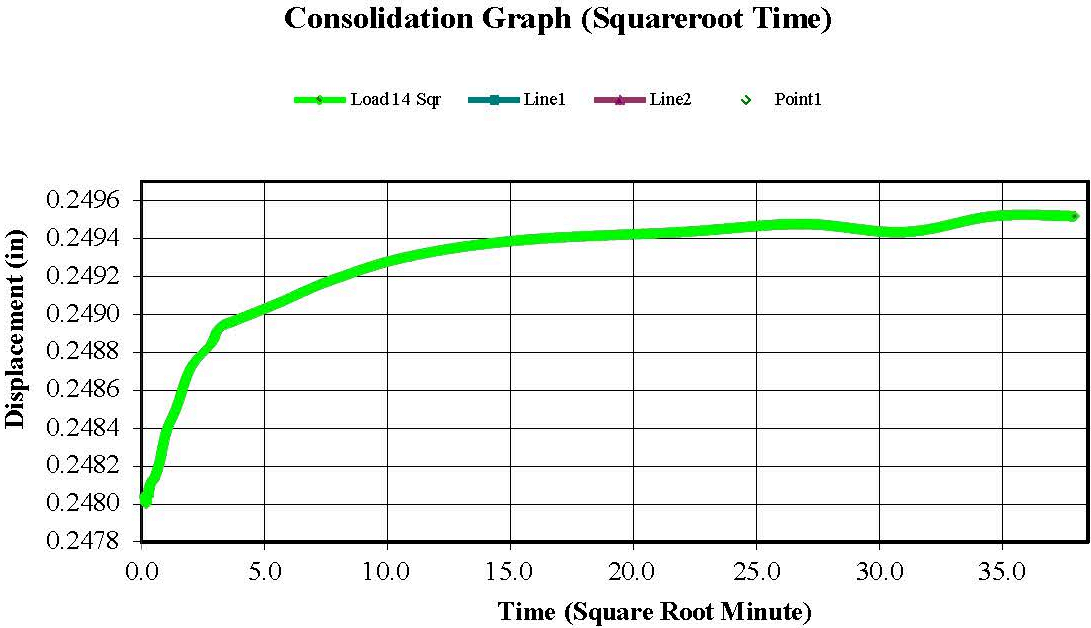
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.2469	0.1317	13.1663	0.5825
1	00:00:01	0.2480	0.1305	13.0526	0.5846
2	00:00:02	0.2480	0.1306	13.0568	0.5845
3	00:00:03	0.2480	0.1305	13.0526	0.5846
4	00:00:04	0.2480	0.1305	13.0526	0.5846
5	00:00:05	0.2480	0.1305	13.0526	0.5846
6	00:00:06	0.2481	0.1305	13.0484	0.5847
7	00:00:12	0.2481	0.1304	13.0442	0.5848
8	00:00:15	0.2481	0.1304	13.0442	0.5848
9	00:00:31	0.2482	0.1304	13.0358	0.5849
10	00:01:01	0.2484	0.1302	13.0189	0.5852
11	00:02:01	0.2485	0.1301	13.0063	0.5855
12	00:04:01	0.2487	0.1299	12.9853	0.5858
13	00:08:01	0.2488	0.1297	12.9726	0.5861
14	00:10:01	0.2489	0.1296	12.9642	0.5862
15	00:15:01	0.2490	0.1296	12.9600	0.5863
16	00:30:02	0.2491	0.1295	12.9516	0.5864
17	01:00:04	0.2492	0.1294	12.9389	0.5867
18	02:00:07	0.2493	0.1293	12.9263	0.5869
19	04:00:14	0.2494	0.1292	12.9179	0.5871
20	08:00:27	0.2494	0.1291	12.9137	0.5871
21	12:00:40	0.2495	0.1291	12.9095	0.5872
22	16:00:53	0.2494	0.1291	12.9137	0.5871
23	20:01:07	0.2495	0.1291	12.9053	0.5873
24	23:59:58	0.2495	0.1291	12.9053	0.5873

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 14) Rebound 8.000 ksf



Consolidation Test Results
(Sequence 15) Rebound 4.000 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325
Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

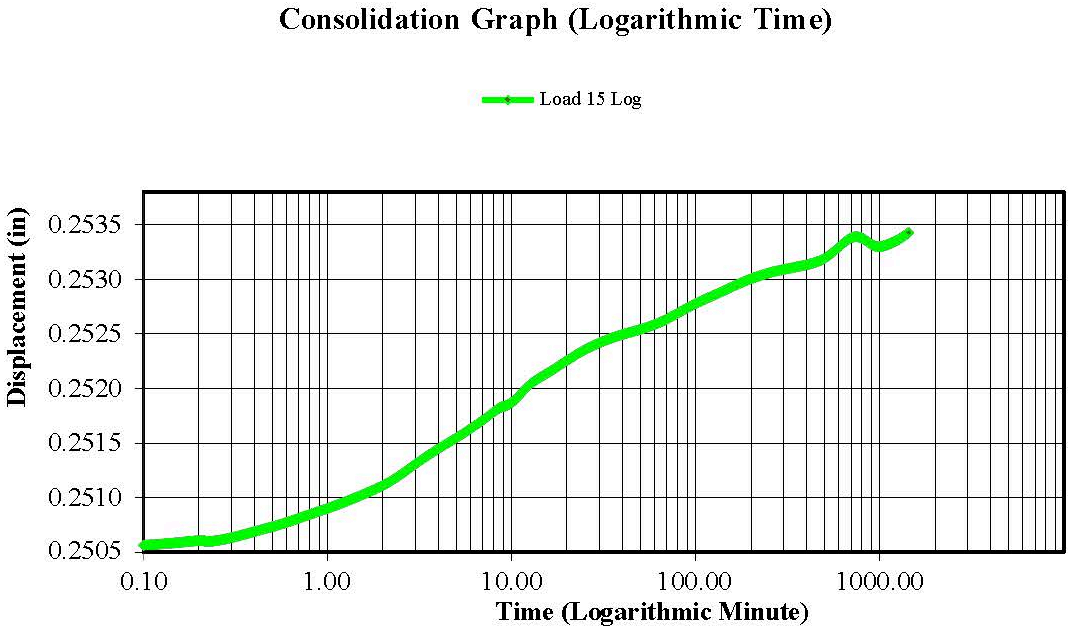
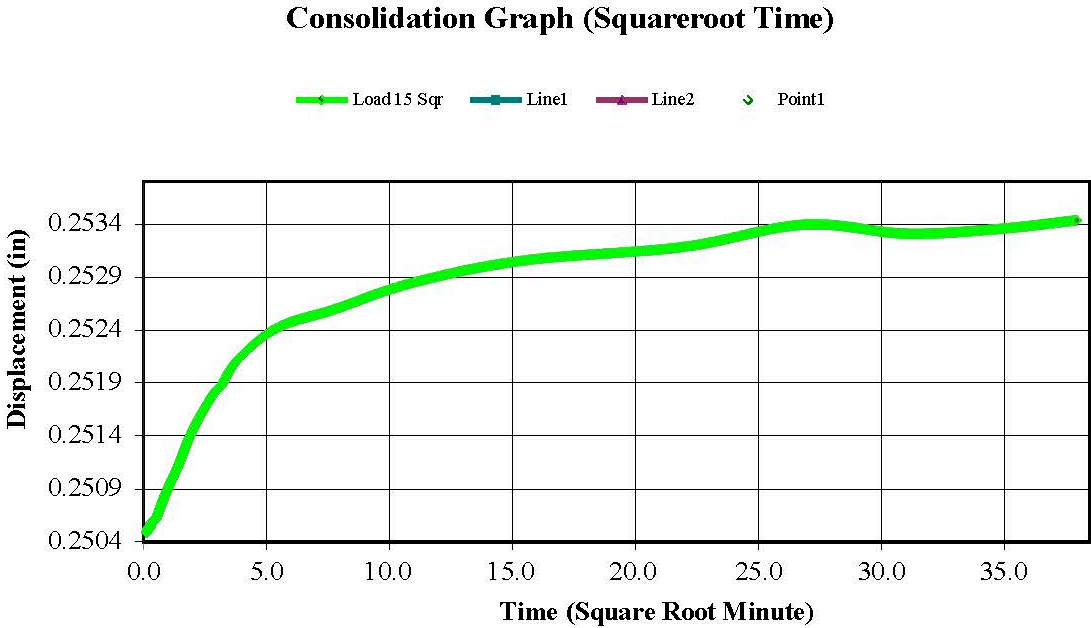
Soil Description: Gray to Dark Gray Sandy CLAY (A-6)
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.2495	0.1291	12.9053	0.5873
1	00:00:01	0.2505	0.1281	12.8084	0.5891
2	00:00:02	0.2505	0.1280	12.8042	0.5891
3	00:00:03	0.2505	0.1280	12.8042	0.5891
4	00:00:04	0.2505	0.1280	12.8042	0.5891
5	00:00:05	0.2506	0.1280	12.8000	0.5892
6	00:00:06	0.2506	0.1280	12.8000	0.5892
7	00:00:12	0.2506	0.1280	12.7958	0.5893
8	00:00:15	0.2506	0.1280	12.7958	0.5893
9	00:00:30	0.2507	0.1278	12.7832	0.5895
10	00:01:00	0.2509	0.1277	12.7663	0.5898
11	00:02:00	0.2511	0.1275	12.7453	0.5902
12	00:04:01	0.2515	0.1271	12.7116	0.5908
13	00:08:01	0.2518	0.1268	12.6779	0.5914
14	00:10:01	0.2519	0.1267	12.6695	0.5916
15	00:15:01	0.2521	0.1264	12.6442	0.5921
16	00:30:02	0.2524	0.1261	12.6147	0.5926
17	01:00:04	0.2526	0.1260	12.5979	0.5929
18	02:00:07	0.2528	0.1257	12.5726	0.5934
19	04:00:14	0.2531	0.1255	12.5516	0.5937
20	08:00:27	0.2532	0.1254	12.5389	0.5940
21	12:00:40	0.2534	0.1252	12.5179	0.5944
22	16:00:53	0.2533	0.1253	12.5263	0.5942
23	20:01:07	0.2533	0.1252	12.5221	0.5943
24	23:59:57	0.2534	0.1251	12.5137	0.5944

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 15) Rebound 4.000 ksf



Consolidation Test Results
(Sequence 16) Rebound 2.000 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

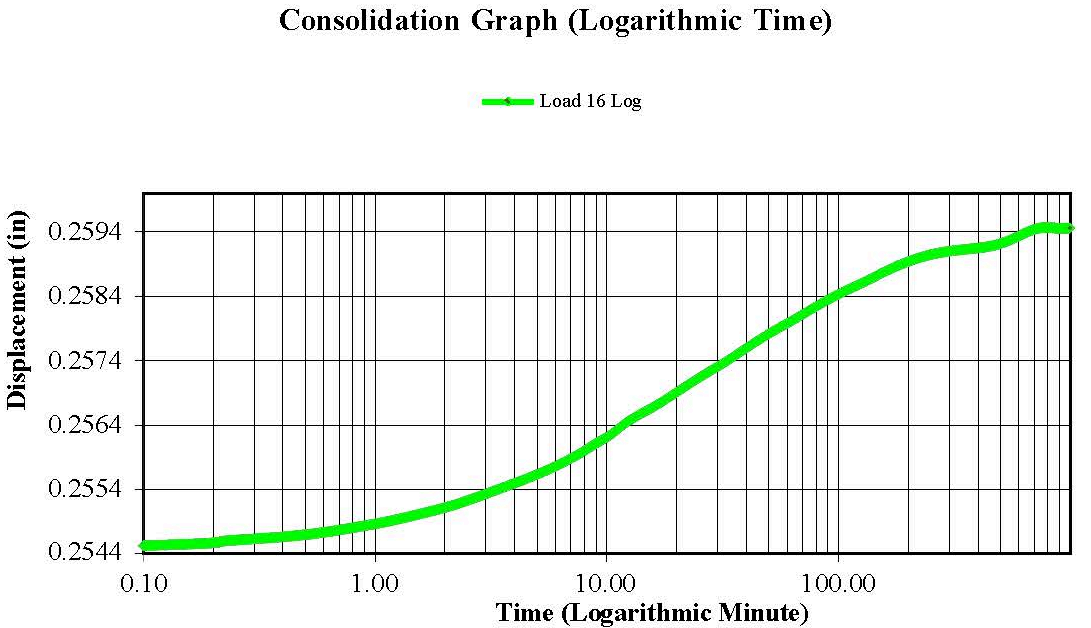
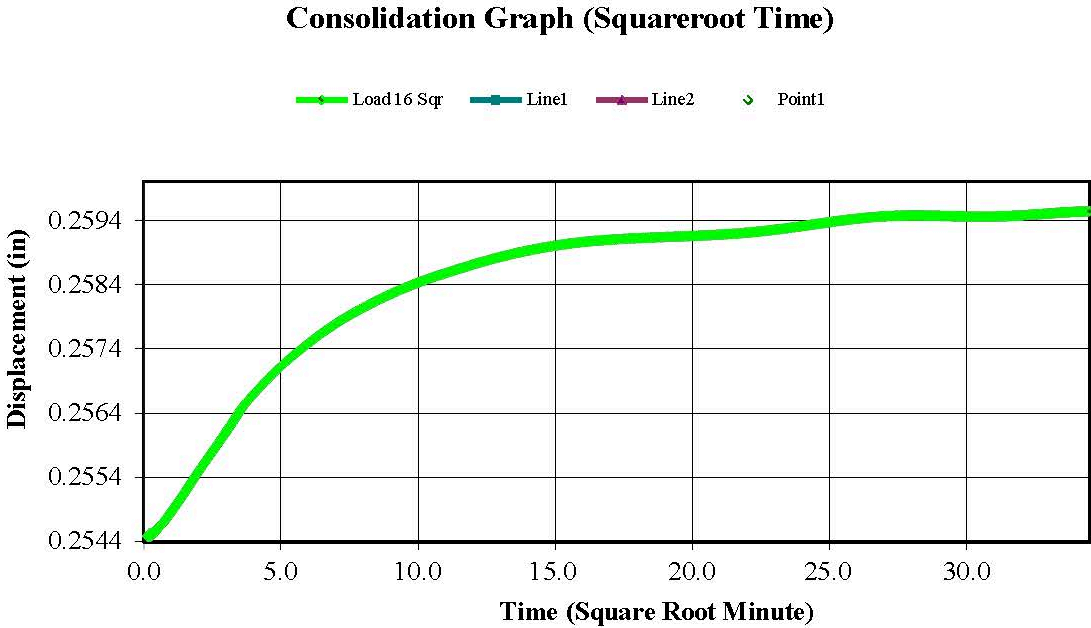
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.2534	0.1251	12.5137	0.5944
1	00:00:01	0.2545	0.1241	12.4084	0.5963
2	00:00:02	0.2545	0.1241	12.4084	0.5963
3	00:00:03	0.2545	0.1240	12.4042	0.5964
4	00:00:04	0.2545	0.1241	12.4084	0.5963
5	00:00:05	0.2545	0.1240	12.4042	0.5964
6	00:00:06	0.2545	0.1240	12.4042	0.5964
7	00:00:12	0.2546	0.1240	12.4000	0.5965
8	00:00:15	0.2546	0.1240	12.3958	0.5966
9	00:00:30	0.2547	0.1239	12.3874	0.5967
10	00:01:00	0.2549	0.1237	12.3705	0.5970
11	00:02:00	0.2551	0.1235	12.3453	0.5975
12	00:04:00	0.2555	0.1231	12.3074	0.5982
13	00:08:01	0.2560	0.1226	12.2568	0.5991
14	00:10:01	0.2562	0.1224	12.2358	0.5995
15	00:15:01	0.2566	0.1219	12.1937	0.6003
16	00:30:02	0.2573	0.1213	12.1263	0.6015
17	01:00:03	0.2580	0.1206	12.0589	0.6027
18	02:00:07	0.2586	0.1200	12.0000	0.6038
19	04:00:13	0.2590	0.1195	11.9537	0.6046
20	08:00:27	0.2592	0.1194	11.9368	0.6049
21	12:00:40	0.2595	0.1191	11.9116	0.6054
22	16:00:53	0.2595	0.1191	11.9116	0.6054
23	20:01:06	0.2595	0.1190	11.9032	0.6056
24	23:59:58	0.2595	0.1191	11.9074	0.6055

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 16) Rebound 2.000 ksf



Consolidation Test Results
(Sequence 17) Rebound 1.000 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

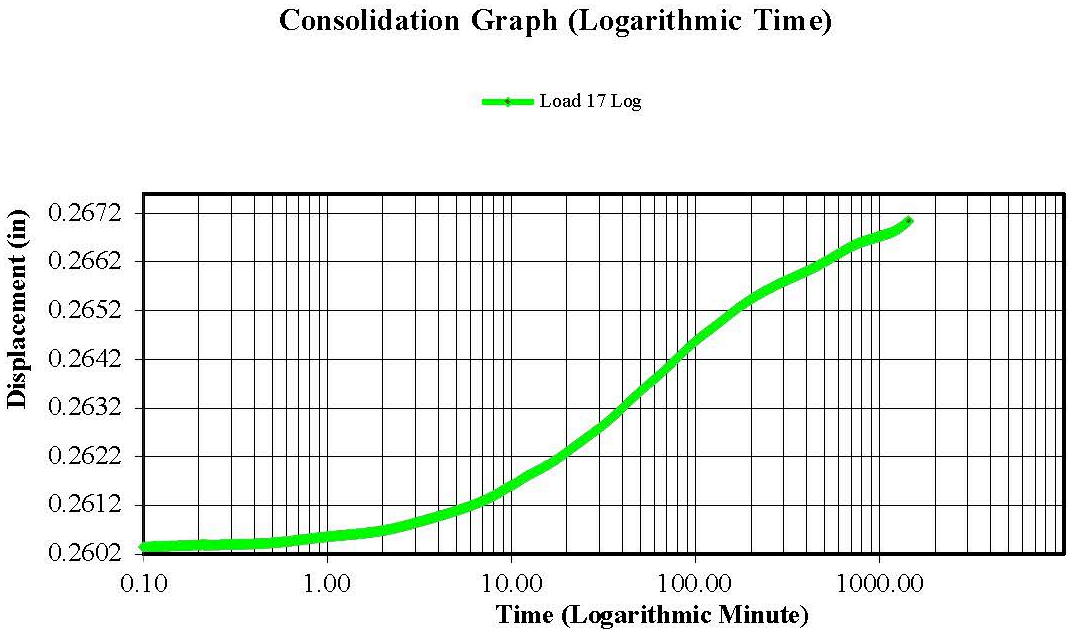
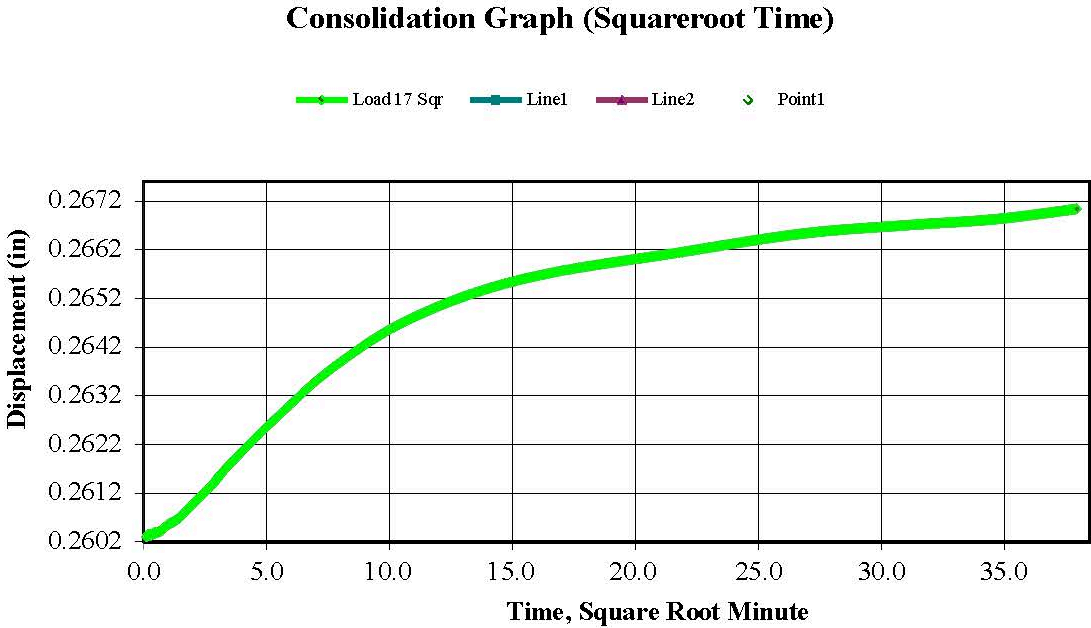
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.2595	0.1191	11.9074	0.6055
1	00:00:01	0.2603	0.1183	11.8274	0.6069
2	00:00:02	0.2603	0.1182	11.8232	0.6070
3	00:00:03	0.2603	0.1182	11.8232	0.6070
4	00:00:04	0.2603	0.1182	11.8232	0.6070
5	00:00:05	0.2603	0.1182	11.8232	0.6070
6	00:00:06	0.2603	0.1182	11.8232	0.6070
7	00:00:12	0.2604	0.1182	11.8189	0.6071
8	00:00:15	0.2604	0.1182	11.8189	0.6071
9	00:00:30	0.2604	0.1181	11.8147	0.6072
10	00:01:00	0.2605	0.1180	11.8021	0.6074
11	00:02:00	0.2607	0.1179	11.7895	0.6076
12	00:04:01	0.2610	0.1176	11.7600	0.6082
13	00:08:01	0.2614	0.1172	11.7179	0.6089
14	00:10:01	0.2616	0.1170	11.6968	0.6093
15	00:15:01	0.2620	0.1166	11.6589	0.6100
16	00:30:02	0.2628	0.1158	11.5789	0.6115
17	01:00:04	0.2638	0.1148	11.4779	0.6133
18	02:00:07	0.2648	0.1138	11.3768	0.6151
19	04:00:14	0.2656	0.1130	11.2968	0.6166
20	08:00:27	0.2661	0.1124	11.2421	0.6176
21	12:00:40	0.2665	0.1120	11.2042	0.6183
22	16:00:53	0.2667	0.1119	11.1874	0.6186
23	20:01:07	0.2668	0.1117	11.1747	0.6188
24	23:59:58	0.2670	0.1115	11.1537	0.6192

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 17) Rebound 1.000 ksf



Consolidation Test Results
(Sequence 18) Rebound 0.500 ksf

Project: R-1015 (site #5)
Location: EB2-B-ST-1 (3.7'-5.7')
WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016
Test Number:

Sample Number: ST-1
Boring Number: EB2-B
Depth: 3.7'-5.7'
Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

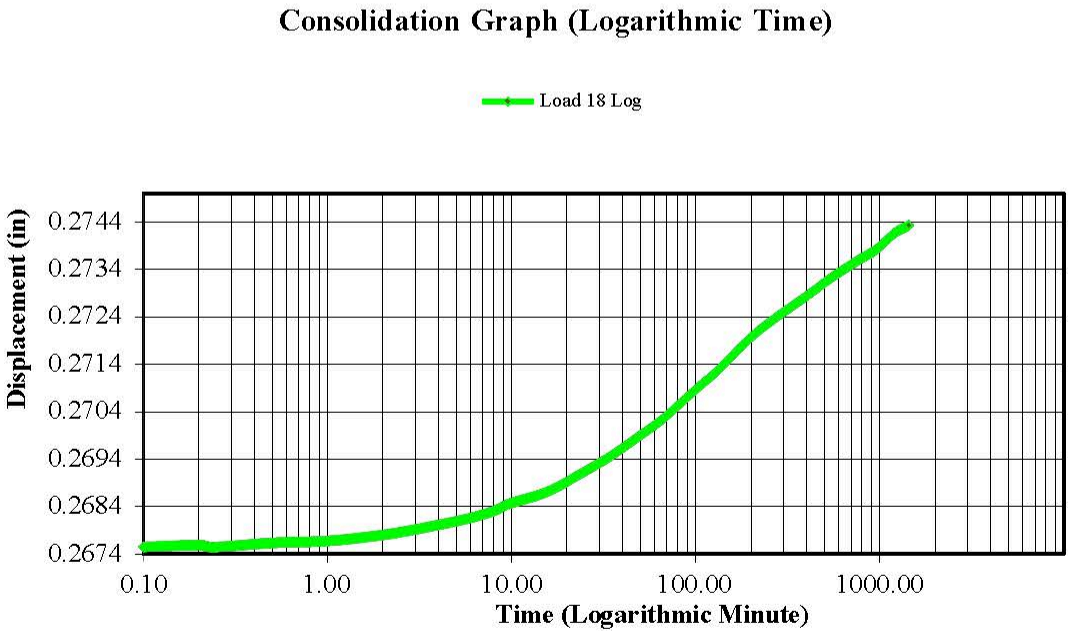
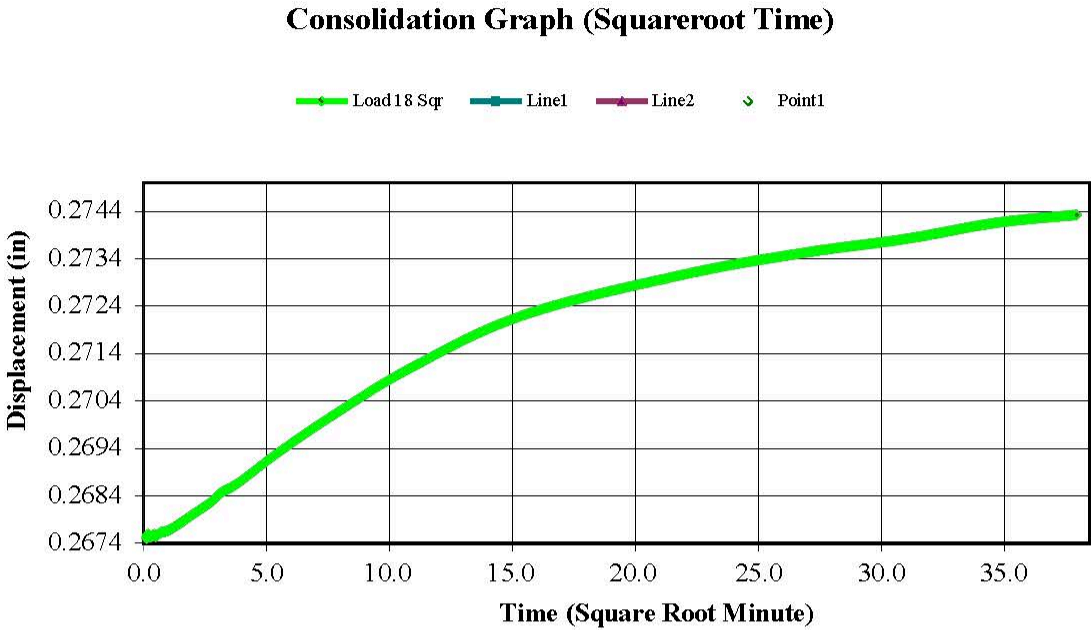
Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.2670	0.1115	11.1537	0.6192
1	00:00:01	0.2675	0.1111	11.1074	0.6201
2	00:00:02	0.2676	0.1110	11.0989	0.6202
3	00:00:03	0.2675	0.1110	11.1032	0.6201
4	00:00:04	0.2675	0.1110	11.1032	0.6201
5	00:00:05	0.2675	0.1110	11.1032	0.6201
6	00:00:06	0.2675	0.1110	11.1032	0.6201
7	00:00:12	0.2676	0.1110	11.0989	0.6202
8	00:00:15	0.2675	0.1110	11.1032	0.6201
9	00:00:30	0.2676	0.1109	11.0947	0.6203
10	00:01:00	0.2677	0.1109	11.0905	0.6204
11	00:02:00	0.2678	0.1108	11.0779	0.6206
12	00:04:00	0.2680	0.1106	11.0568	0.6210
13	00:08:00	0.2683	0.1103	11.0274	0.6215
14	00:10:00	0.2685	0.1101	11.0105	0.6218
15	00:15:01	0.2687	0.1099	10.9895	0.6222
16	00:30:01	0.2693	0.1093	10.9263	0.6234
17	01:00:03	0.2701	0.1085	10.8463	0.6248
18	02:00:06	0.2711	0.1075	10.7453	0.6267
19	04:00:13	0.2722	0.1064	10.6358	0.6287
20	08:00:26	0.2731	0.1055	10.5516	0.6302
21	12:00:40	0.2735	0.1051	10.5053	0.6310
22	16:00:53	0.2738	0.1048	10.4758	0.6316
23	20:01:06	0.2741	0.1044	10.4421	0.6322
24	23:59:58	0.2743	0.1043	10.4253	0.6325

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 18) Rebound 0.500 ksf



Consolidation Test Results
(Sequence 19) Rebound 0.250 ksf

Project: R-1015 (site #5)

Location: EB2-B-ST-1 (3.7'-5.7')

WBS No.: 34360.1.1

Project Number: CS34.325

Test Date: 6/24/2016

Test Number:

Sample Number: ST-1

Boring Number: EB2-B

Depth: 3.7'-5.7'

Sample Type: Undisturbed

Soil Description: Gray to Dark Gray Sandy CLAY (A-6)

Remarks:

Index	Time	Displacement (in)	Settlement (in)	Axial Strain (%)	Void Ratio
0	00:00:00	0.2743	0.1043	10.4253	0.6325
L 1	00:00:01	0.2747	0.1038	10.3832	0.6333
2	00:00:03	0.2747	0.1038	10.3832	0.6333
L 3	00:00:04	0.2747	0.1038	10.3832	0.6333
4	00:00:05	0.2747	0.1038	10.3832	0.6333
L 5	00:00:06	0.2747	0.1038	10.3832	0.6333
6	00:00:07	0.2748	0.1038	10.3789	0.6333
L 7	00:00:13	0.2748	0.1038	10.3789	0.6333
8	00:00:16	0.2748	0.1038	10.3789	0.6333
L 9	00:00:31	0.2748	0.1038	10.3789	0.6333
10	00:01:01	0.2749	0.1037	10.3705	0.6335
L 11	00:02:01	0.2749	0.1037	10.3663	0.6336
12	00:04:02	0.2750	0.1035	10.3537	0.6338
L 13	00:08:02	0.2752	0.1034	10.3411	0.6340
14	00:10:02	0.2752	0.1033	10.3326	0.6342
L 15	00:15:02	0.2754	0.1032	10.3158	0.6345
16	00:30:03	0.2758	0.1027	10.2737	0.6353
L 17	01:00:05	0.2766	0.1020	10.1979	0.6366
18	02:00:08	0.2775	0.1011	10.1053	0.6383
L 19	04:00:15	0.2789	0.0996	9.9621	0.6409
20	08:00:28	0.2801	0.0984	9.8442	0.6431
L 21	12:00:41	0.2809	0.0977	9.7684	0.6445
22	16:00:54	0.2813	0.0973	9.7263	0.6452
L 23	20:01:08	0.2816	0.0970	9.6968	0.6458
24	23:59:59	0.2818	0.0968	9.6758	0.6461

Tested By: Tony Summers

Checked By: Andrew Burton

Consolidation Test Results
(Sequence 19) Rebound 0.250 ksf

